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REPORT OF THIRD MEETING OF DIRECTORS OF CENTRES PARTICIPATING IN THE STATISTICAL TRAINING PROGRAMME FOR AFRICA (STPA)

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A. ATTENDANCE AND ORGANIZATION OF WORK

1. The Third Meeting of Directors of the Centres participating in the Statistical Training Programme for Africa (STPA) was held at ECA Headquarters Addis Ababa, from 31 October to 4 November 1983. A message of the ECA Executive Secretary was read by Mr. Makramalla, Chief, Socio-Economic Research and Planning Division, Officer-in-Charge of the secretariat, at the opening session.

2. The meeting was attended by the Directors of the following STPA centres or their representatives: Centre européen de formation des statisticiens - économistes des pays en voie de développement (CESD) Paris; Collège statistique Ecole nationale d'économie appliquée (ENEA), Dakar; Department of Statistics, National University of Lesotho, Maseru; Department of Statistics, University of Botswana, Gaborone; Department of Statistics, University of Ghana, Legon; Department of Statistics, University of Ibadan, Ibadan; Ecole nationale supérieure de statistique et d'économie appliquée (ENSEA), Abidjan; Eastern Africa Statistical Training Centre (EASTC), Dar-es-Salaam; Institut africain et mauricien de statistique et d'économie appliquée (IAMSEA), Kigali; Institut de formation et de recherche démographiques (IFORD), Yaoundé; Institute of Statistics and Applied Economics, Makerere University, Kampala; Institut de statistique, de planification et d'économie appliquée (ISPEA), Yaoundé; Institut des techniques de planification et d'économie appliquée (ITPEA), Algiers; and Regional Institute of Population Studies (RIPS), Legon.

3. The representatives of the following user countries also participated in the meeting. Central African Republic, Ethiopia, Sudan, Togo and Zambia.

4. The following STPA associate centres were also represented: Applied Statistics Research Unit, University of Kent, Canterbury; Institute of Social Studies (ISS), The Hague; International Statistics Programs Center (ISPC), Washington, D.C.; and Munich Centre for Advanced Training in Applied Statistics for developing countries, Munich.

5. The Food and Agriculture Organization of the United Nations (FAO), the United Nations Statistical Office (UNSO) and the World Health Organization (WHO) were represented.

6. Representatives of the following institutions and organizations participated in the meeting as observers: Commission of the European Communities (Directorate-General for Development and Statistical Office of the European Communities); Commonwealth Secretariat; Institut national de la statistique et des études économiques (INSEE), France; International Statistical Institute (ISI); Ministry of External Relations, Cooperation and Development, France; National Central Bureau of Statistics, Sweden; Overseas Development Administration, United Kingdom; and United States Agency for International Development (USAID).

7. Prof. S.O. Adamu, Head, Department of Statistics, University of Ibadan was elected Chairman of the meeting, with Mr. O. Balde, Director of Studies ENSEA, as Vice-Chairman and Mr. B. Ntigulirwa, Director of IAMSEA as Rapporteur.

B. AGENDA

8. The meeting adopted the following agenda:

1. Opening address
2. Election of officers
3. Adoption of the agenda and other organizational matters
4. Matters arising from the Second meeting of Directors of centres participating in the STPA
5. Some selected issues in the development of STPA
6. Cooperative development of teaching programmes
   (a) Guide syllabus for in-service statistical training
   (b) Guide syllabus for professional statistical training
   (c) Proposed content of EDP courses at STPA centres
   (d) Demographic training at STPA centres
   (e) Programme of workshops and seminars for 1984-1985
7. Joint EEC/ACP/ECA study of statistical training needs for Africa
8. Technical and financial assistance in the field of statistical training
   - United Nations system
   - Bilateral and other multilateral agencies and institutions
9. Dissemination of information on training activities
10. Other business
11. Adoption of the report

C. ACCOUNT OF PROCEEDINGS

Opening address

9. In his message, Mr. Adebayo Adedeji, ECA Executive Secretary, pointed out that the Statistical Training Programme for Africa (STPA) was established in order to contribute to the solution of the problems of availability of skilled manpower in Africa in the statistical field. He also recalled the important role played by the meeting of Directors in advising the Joint Conference of African Planners, Statisticians and Demographers, and ultimately the ECA Conference of Ministers, on the development of African statistical training which is an integral part of the statistical development programme.

10. He then emphasized the need to examine critically the past achievements of STPA at the time when its fifth anniversary is being celebrated and to make adjustments to the remainder of the work plan.

11. He went on to examine two specific questions among others, namely the question of availability of fellowships for studies at STPA centres and the issue relating to the best way of training trainers. On the first question, he noted that there was no planning in general in the area of training. This makes it difficult to mobilize the necessary resources in a timely manner. He suggested that there should be effective procedures which may translate the interest expressed by donors into definite flows of funds to provide student fellowships. On the question of training of trainers, he indicated that as much as possible has been done so far under the STPA but there still remains a lot more. He recommended that the meeting should undertake a careful review of the best way of training teaching staff to ensure that the actual needs of the region are met.

12. He expressed his satisfaction at the completion of the study of the needs for statistical training in Africa under the joint sponsorship of the Commission of the European Communities, the Secretariat of the Group of African, Caribbean and Pacific (ACP) States and ECA. He invited the participants to make comments and suggestions on the conclusions and recommendations of the study.

13. He then pointed out that the co-operative development of the teaching programmes constituted one of the major functions of the meeting and drew attention to the issues to be examined by the participants in this connexion, particularly the guide syllabus for in-service training prepared by ECA, the guide syllabus for professional training planned for 1984, the proposed course content of electronic data processing for use by STPA centres and demographic training at these centres.

14. He recognized that external assistance will continue to be required for a number of years to come for the development of African statistical training and made an appeal for co-ordinated efforts between African governments, national and international donor agencies and institutions. He indicated that the reply of the European Economic Community (EEC) to the request submitted to it for support to the STPA centres through the regional programme of the European Development Fund was of special interest.

15. Finally, he outlined the action of the secretariat concerning the implementation of a resolution on special assistance to Portuguese-speaking African countries adopted in Freetown by the ECA Conference of Ministers.

D. MATTERS ARISING FROM THE SECOND MEETING
(Agenda item 4)

16. A summary of the main considerations arising from the second meeting of directors of STPA centres was provided in document E/ECA/STPA/DM3/1. In presenting this paper, the secretariat noted that the matters arising were included in the agenda for the third meeting. This was because there are a number of essential issues which have to be kept continuously under review if the training programme is to perform satisfactorily. The most important of these are the provision of teaching staff, the courses to be taught, the overall training requirements and technical co-operation in executing the programme.

17. Progress had been made in these areas along the lines requested by the previous meeting. Medium and long term requirements for the training of staff were becoming clearer but the policy for such training and its funding needed careful examination. Considerable work had been accomplished in the preparation of middle-level and in-service guide syllabuses and the meeting would be invited to advise on the approach to a professional level syllabus. The 1977 ECA estimates of overall statistical training needs had been up-dated through the recently completed joint EEC/ACP/ECA study which, apart from some increase in the figures for middle level staff and English-speaking professionals, largely confirmed the 1977 estimates. Technical and financial assistance to the programme had continued to be of principal concern and the response of EEC to the 1981 request of the ACP Council of Ministers, in which the joint study constituted an initial step, would be of special interest.

18. Other matters dealt with at the request of the second meeting included the provision of better information on short-term training facilities outside Africa. However research at STPA centres still called for careful planning, particularly in

the context of data analysis and applications. It was further pointed out that news on recent efforts to regionalize some of the STPA centres would be welcomed by the meeting.

19. The meeting agreed that substantive issues would be taken up under other agenda items and there was no discussion under matters arising.

E. SOME SELECTED ISSUES IN THE DEVELOPMENT OF STPA
(Agenda item 5)

20. After this item had been introduced by the secretariat on the basis of document E/ECA/STPA/DM3/2, the participants agreed that the different questions raised should be considered in the following order:

- Activities carried out so far by STPA, up to the celebration of its fifth anniversary;
- Establishment of machinery to facilitate and accelerate requests for, and awards of, fellowships for study at STPA centres;
- Training of trainers;
- Adoption by each centre of a programme for the recruitment and/or training of trainers;
- Strengthening of the criteria for admitting new STPA centres and efforts to be made by present members to respond effectively to the international service criteria provided;
- Consideration of the request for admission to STPA membership by the Statistics Division of the Mathematics Department of Nairobi University;
- Arrangements to be made by associate centres to enable them to respond better to the needs of the African region as regards further training or specialized training in statistics;
- Special assistance in statistical training to Portuguese-speaking African countries.

21. The participants felt that the activities undertaken by the regional component of STPA within ECA had been satisfactory. They stressed that the staff of the regional component of STPA should be brought up to strength and recommended that the second adviser in anglophone statistical training should be recruited as soon as possible so that STPA could expedite these activities. They also expressed the hope that the programme would benefit from adequate financial support over a relatively long period.

22. Several participants felt that it was essential to evaluate STPA as a whole and to compare its achievements with the initial objectives. On this subject, the secretariat circulated, at the request of the participants, resolution ECO (XVIII)/ Res. 9 of the ECA Executive Committee, establishing STPA, and the original programme document. After being informed that the joint EEC/ACP/ECA study of statistical training needs constituted an evaluation of STPA, the participants decided to postpone discussions of this question until item 7 of the agenda.

23. The participants considered the secretariat's proposal regarding the planning of the fellowship needs of the countries of the region. Such planning would constitute a preliminary commitment that the African countries applying for fellowships would observe a reasonable range. This would allow the donor countries to set aside the necessary funds and initiate the necessary action, at the right time, to facilitate and accelerate the fellowship awards.

24. Some participants pointed out that the national statistical services would sometimes have difficulty in getting their statistical training needs accepted by the national organizations co-ordinating the fellowships. Others pointed out that each donor organizations has its own procedure for the award of fellowships and that it was difficult to propose a single procedure that was acceptable to all. The representative of the Overseas Development Administration, United Kingdom, informed the meeting of the procedures for the award of fellowships in his country which applied to all fields of training. Fellowships were awarded to individuals following requests formulated by the Governments. Consequently, it is impossible to announce in advance the number of fellowships intended for the training of statisticians.

25. The question of the training of trainers gave rise to long discussions.

26. Some participants thought that Ph.D programmes were not the best means of training trainers. Such studies usually led to a research diploma and it was not necessary to have a trainer with such a diploma in an institute which did not engage in research. They also suggested various methods of training trainers, including the outposting of trainers to national statistical services to acquire practical experience, their secondment to an institute as assistant to a good professor, and the twinning of third-world universities with universities in developed countries with a view to encouraging exchanges of teaching staff.

27. Other participants maintained, on the contrary, that the trainers' knowledge should far exceed that of the trainees. They felt that, once the trainers had acquired sufficient general knowledge, they should then receive specialized training. They also pointed out that the aspirations and interests of the trainees should be borne in mind with a view to their possible promotion. Finally, they stressed that the trainers should contribute to the development of statistical research in Africa.

28. The meeting recognized the difficulty, not to say impossibility, of proposing a single trainer training model. It was however agreed that the training of trainers required more than just imparting of technical knowledge and includes such questions as how to teach. The issue was to be considered pragmatically. Situations varied according to whether the centre belonged to the university-type anglophone system or to the special-school-type francophone system. They also varied in accordance with the juridical nature of the centre (a regional centre in its own right or a national centre serving regional purposes) and the status of its teaching staff. Furthermore, the type of persons to be trained had to be identified (permanent or temporary teaching staff) as had to be the type of training required (advanced training, specialization, refresher training or workshop participation) not to mention the level of training provided by teaching staff.

29. It was advisable, to the extent possible, to train trainers in Africa under the system of technical co-operation among developing countries. Certain centres in Africa provided courses at the masters and doctorate levels but were not fully used particularly because of financial problems. Some participants suggested that one or two centres in Africa should be identified to provide specialized training in national accounting and agricultural statistics for example. A participant suggested that STPA might consider setting up a centre within the African region which organises short courses, workshops, and seminars for trainers on the lines of what is done at the International Centre for Theoretical Physics at Trieste, Italy and the Centre for Pure and Applied Mathematics in Nice in France.

30. At the same time however, profitable use could be made of certain centres outside Africa, in particular those centres associated with STPA. They could be used for certain types of training and co-operation with them would accordingly have to be strengthened. Representatives of the associate centres stated that they were prepared to contribute to the training of African trainers.

31. Certain participants gave an account of their experiences in recruiting teaching staff and monitoring their work for at least one year before sending them out for further training. In this way, they could identify candidates who had the ability to become trainers. Other participants stressed the need for trained teching staff to acquire some experience in order to be able to play their role fully.

32. Participants recognized that each centre would have to adopt a programme for the recruitment and/or training of trainers. Directors of the Centres briefly reported on their activities in this area. Since the proceding year, IAMSEA of Kigali had begun to africanize its teaching staff. Three out of its eight teaching staff members were Africans. One teacher was currently being trained under a fellowship awarded from the regional budget of STPA. At the Collège statistique de Dakar, the teaching staff were statisticians directly seconded by the Government and so the problem of recruitment did not arise but the staff still needed training. ENSEA of Abidjan had in the current year begun to train trainers. Two teachers were currently being trained, one of them is on a two year STPA fellowship to prepare for a diplôme d'étude approfondie (DEA) and a doctorate in econometrics; and the second, a demographer, had selected in-service training by teaching and conducting research in the field. He had passed his DEA and was preparing for a doctorate in demography. The school tried every year to attract one or two young degree holders to send for training before they become permanent teachers. The status problem of the teaching staff was currently being discussed with the Government. ISPEA of Yaoundé had since the previous year set up a training programme for trainers. Five permanent staff members who had all served for at least one year were currently being trained in Canada. ISPEA was in the process of becoming a community institute for the States of the Central African Economic and Customs Union (UDEAC). It would be interested in refresher courses for teaching staff and would like information on those courses to be sent to it directly. In the past, the Statistics Department of the University of Lesotho regularly sent six teaching staff members for post-graduate training. The pace had slowed down. The department was also interested in seminars, exchange of experience and research. The Statistics Department of the University of Botswana had six full-time teachers. It also had in training two teachers, one of whom had an STPA fellowship. The teachers sent for training need to have been working with the Centre. ISAE of Kampala had 26 teaching posts most of which were vacant. Other posts were financed by such external agencies as the Commonwealth Fund for Technical Co-operation (CFTC) for full-time teachers and ECA for short-term consultants. In the future, assistance would be forthcoming from EEC. The Centre had prepared an integrated programme for the training of trainers. Young graduates had been recruited to work

at the centre for a year during which they were evaluated. Meanwhile, the centre was seeking training fellowships for promising candidates. Fourteen teachers were currently being trained in various countries. Finally, the Statistics Department of the University of Ibadan needed to train trainers at the doctorate level. The teachers concerned generally went on a year's sabbatical to the university of a developed country to conduct research. They came back to Ibadan to defend their thesis. In the coming year, the Department will send a teacher for specialized training at the University of Kent on a six month fellowship. The only problem that of financing the training of trainers, is always there.

33. The meeting expressed agreement with the proposal of the secretariat to upgrade the admission requirements for new STPA Centres, with particular regard to the international service provided. Indeed, STPA Centres had specific responsibilities in carrying out work programmes and also received some degree of priority in technical and financial assistance. For that reason, the number of such centres should be limited. Certain participants suggested however that, in addition to the criterion that one-third of the student in-take should be non-national Africans, minimum registration levels should also be introduced. It was decided that final conclusions on this question would be drawn after item 7 of the agenda has been considered.

34. The meeting also supported the idea that centres currently participating in the Statistical Training Programme for Africa should endeavour to attain their set objectives. Certain participants proposed that member Centres which did not meet their targets could be suspended or expelled.

35. Regarding the application for membership received from the Statistics Division of the Mathematics Department of Nairobi University, the Meeting felt that it needed further information to take a decision. It requested the secretariat to maintain contact with the Centre and with the Kenya Bureau of Statistics so that the question could be reconsidered at the next meeting of Directors.

36. Participants also approved the criteria for selection of associate Centres indicated in paragraph 54 of the document under study and noted with satisfaction the activities undertaken or planned by current associate members and other institutions with particular reference to the training of African trainers, the organization of courses in specialized areas such as survey methods, household surveys and agricultural statistics.

37. The secretariat was further requested to continue identifying other associate Centres, in particular those of French expression. The FAO representative indicated that the Government of Italy had recently organized a training programme for agricultural statisticians and intended to do so every year. Since Japanese carried out some training in statistics in the past at which some African countries attended, there may be a need to contact them for any possible assistance in identifying associate centres.

38. Finally, on the question of special assistance in statistical training to Portuguese-speaking African countries, the Meeting felt that stress should be laid on training at the national level and approved the secretariat's proposal for the preparation of a programme of in-service training adopted to the conditions of those countries. The Director of CESD informed participants that the co-ordination meeting of Directors of French-speaking African Centres held in June had proposed that candidates of countries belonging to the group should take the joint competitive examination of ingenieurs des travaux statistiques (ITS) from test papers translated into Portuguese. An accelerated

training programme in French should be organized for candidates that passed the competitive examination, as is being done by the College statistique of Dakar for ingénieur des travaux statistiques students from Cape Verde whose training in French was given by the University of Dakar.

F. COOPERATIVE DEVELOPMENT OF TEACHING PROGRAMMES
(Agenda item 6)

Guide Syllabus for In-service Statistical Training
(Agenda item 6(a)

39. A representative of the secretariat introduced the background documents: Introduction to the guide syllabus for In-service Statistical Training (E/ECA/STPA/DM3/3) and Guide syllabus for In-service Statistical Training (E/ECA/STPA/DM3/12). The documents dealt with objectives and development of the guide syllabus, time location, arrangement of courses, teachers and teaching materials, recognition of the in-service training certificate by governments and STPA Centres and the content of the guide syllabus.

40. In the discussions which followed, the participants enquired whether any job analysis was done before the content of the syllabus on in-service statistical training was determined. The secretariat indicated that though no formal job analysis was done, members of the secretariat who prepared the guide syllabus had first hand knowledge of work being done in most African countries and this had been taken into account in preparing the syllabus. An additional consideration was the need to make the content of the in-service training proposed roughly equivalent to that of the certificate course.

41. A question was also asked as to whether an evaluation of existing in-service training schemes in the region had been undertaken to find out the number of students trained, the diversity of the subjects covered, the quality of the training as measured by the end product and the reasons for failure or success of the various schemes. The representative of the secretariat explained that a questionnaire had been circulated to all national statistical offices and most of the information required had been obtained and this has been used as background material for the preparation of the guide syllabus. It was emphasised by the representative of the secretariat that in certain countries the in-service training schemes had failed because the products of the training did not derive any personal advantages from following the course and in at least one country the trainees had refused to take the course until their career prospects consequent upon their completion of the course had been decided.

42. Other participants stressed that the guide syllabus should be taken as guidelines which should be modified to suit local needs and conditions. In this connexion, it was suggested that, instead of awarding one certificate at the end of the three stages of training, certificates could be awarded over a number of those stages. The condition of service should then be related to these qualifications, with exceptions to the general rule based on such criteria as experience being considered.

43. With respect to the question of recognition of in-service training certificates by governments and STPA Centres, it was the general view that this was a rather difficult issue. However, most participants thought that if the area STPA Centres

were to collaborate with the national statistical office in organizing the in-service training and also in moderating the examination at the end of the course, there was a better chance of recognition by both the STPA Centres and the governments. In this connexion, the approach of the Institute of Statisticians in London in exempting graduates of centres with which it has special relationships from some stages of its examinations was cited as a good example. It was also mentioned that the Eastern African Statistical Training Centre (EASTC) at Dar-es-Salaam had similar arrangements with Zambia and Zimbabwe. This had proved successful mainly because the directors of statistics in those countries are on the Advisory Board of the Centre, and the Centre is also involved in the end of course examinations of the in-service training centres.

44. There was some concern that such an arrangement may not be acceptable to the civil service commissions of certain countries. However, it was the view of the secretariat that if the national statistical office and STPA Centre could mutually agree on a procedure for recognition such as that in existence between EASTC on one hand and Zimbabwe and Zambia on the other, there was the possibility that the civil service commission may recognize the certificate obtained after in-service training.

45. The meeting then considered certain modifications to the syllabus. It was proposed that some of the items were not in proper sequence and that for example under section 3.3 second paragraph under probability, "goodness-of-fit tests for independence and for fitting of distributions" should be transferred to the following section on statistical inference. It was also proposed that the following topics be included: efficiency, consistency and stochastic processes. Under section 2.5d(v) International Trade Statistics, it was proposed that "methodology of processing trade data" and "description of various types of tables and their uses" should be included. In response, the representative of the secretariat indicated that certain topics like stochastic processes had been deliberately excluded from the syllabus because it was considered that they were both too complex and irrelevant to the level of training.

46. The importance of programmed teaching was mentioned. As an example the block method of programme teaching was described and emphasis was laid on the importance of examples and case studies in such a programme.

47. The meeting then turned its attention to the coverage of special subjects. It was emphasized that some centres lacked the capability to teach such subjects as agricultural statistics. There was need therefore for the centres to be provided with such capability if such courses are to be taught. UN specialized agencies, ECA regional advisory services, bilateral and inter governmental organizations should help in this regard.

48. The importance of notes and guidelines to teachers was also stressed.

49. The meeting finally approved the Guide Syllabus in principle, subject to some of the modifications which had been proposed.

Guide Syllabus for professional statistical training
(Agenda item 6(b)

50. Introducing the agenda item, a representative of the secretariat explained that the background document, E/ECA/STPA/DM3/4 (Guide Syllabus for professional training) provided a brief summary of the secretariat's views on the objectives, scope, preliminary arrangements for undertaking the work on preparing the guide syllabus for professional training and selected issues in connexion with the assignment. The guide syllabus is expected to cover the following types of training: undergraduate training, service courses and postgraduate training up to masters degree or Ingenieur statisticien-economiste (for the French-speaking centres). To undertake the assignment, two teams (one for English and the other for French-speaking countries) will be appointed. Each team will consist of three persons (two consultants and an ECA staff member).

51. In the discussions which followed certain issues were raised. The view was expressed that the background paper did not try to justify the need for the guide syllabus. Some of the questions asked were: Had there been any demand from any centre for such a document? Was the approach suggested cost-effective? What was the basis for determining the composition of the teams? There was also some concern about the time lag between the 3rd meeting of Directors and the completion of the guide syllabus. It was pointed out that many centres were undertaking significant revisions of their current syllabuses and that the guide syllabus might come out too late to have any impact on such revisions.

52. The representative of the secretariat explained that the co-operative development of teaching programmes was one of the tasks assigned to the ECA secretariat from the very beginning of the STPA project. The secretariat was expected to assist in the development of curricula. This had led to the inclusion of the project on the guide syllabus for professional training in the approved work programme of STPA. With respect to the cost-effectiveness of the project, the representative of the secretariat indicated that costs should also be related to benefits and if the guide syllabus provided guidance to STPA centres and helped in the practical orientation of professional training courses, the benefits to the African region would be immense. However, the meeting cautioned that the cost of the project should be kept in mind to ensure that it did not prove too expensive in relation to any benefits which might accrue from it. The meeting was also informed about a similar project which had been undertaken in respect of the French-speaking centres in 1976. This experience showed that the project could be a worthwhile one.

53. It was emphasised by the meeting that the exercise should include a study and analysis of existing syllabus. Such a study could result in a guide syllabus, which, it was recognized, would be of particular value to institutions intending to introduce professional level training.

54. The meeting then addressed itself to a number of issues raised in paragraph 13 of the background document. The first related to how practical orientation of courses could be achieved. It was explained that standard textbooks did not have the necessary orientation. Three ways of remedying the situation were suggested. The first was to undertake research on statistical applications in the region. The second was for information on existing research to be compiled and disseminated more widely. The third was for research results to be converted into teaching material. It was pointed out that not enough sharing of teaching materials seem to be going on among centres. ECA through STPA could play a role in this connexion.

55. The next issue was whether the syllabus should aim only at the training of statisticians for national services or for all sectors including academic and research institutions and other institutions in the public and private sectors. It was the consensus of opinions in the meeting that it should cater for all categories and that this could be achieved through a flexible programme with a set of core subjects and a number of options.

56. Another question considered by the meeting was the sources of teaching material which will emphasise the practical orientation of courses. In this connexion, the secretariat explained that attempts were being made by it to obtain information on the types of problems encountered in carrying out household surveys in African countries. This could provide material for teaching in one area.

57. In this connexion, it was suggested that attachment of students to statistical organizations would only be useful if there is a close relationship between the training centre and the statistical organization and if a list of actual projects on which the students would work were identified before the start of the attachment. It was however mentioned that practical demonstration surveys or other projects might be a better alternative to on-the-job training.

58. The issue of number of hours to be allocated to the different subjects which was raised by the secretariat was not discussed.

59. The next topic discussed was the concept of credit hours. The representative of one of the centres indicated that this concept had been incorporated explicitly into their teaching programme and this had allowed greater flexibility in the choice of subjects by students.

60. After thorough discussion, the meeting agreed that economics, development planning and accounting, including accounting matrices such as the Social Accounting Matrix (SAM) and the Food Accounting Matrix (FAM) should be included in the guide syllabus.

61. The meeting finally stressed that in the preparation of the guide syllabus for professional training the consultants should always bear in mind that the end product should reflect the needs of the African region. Particular attention should be given to producing a syllabus which will contribute to the continuing dialogue between producers and users of statistics. The FAO representative pointed out that individual topics in the syllabus should be annotated to elucidate their objectives.

Proposed content of EDP at STPA centres
(Agenda item 6(c))

62. Introducing document E/ECA/STPA/DM3/5 on the proposed content of electronic data-processing courses at STPA centres, the representative of the secretariat pointed out that so far the data-processing instruction already introduced to varying degrees in the STPA centres had been mainly theoretical because of their limited access to data-processing equipment. Now that reliable, efficient and cheap micro-computers had appeared on the market, all the centres could obtain data-processing equipment and appropriate software for practical training.

63. The three-year programme proposed was therefore based on the assumption that systems suitable for practical training would be available. Data-processing would occupy some 15 per cent of the time allocated, which is approximately 2-3 hours in the first two years and 4 hours in the third year. The time spent by students on individual work was not included in those estimates.

64. Two programming languages had been proposed for introduction in the first year: FORTRAN and BASIC. But a single language could be chosen, depending on the principal compiler used on the systems.

65. COBOL had been proposed for the second year, firstly, because it was the language most commonly used in data-processing centres and, secondly, because it was the language which formed the basis for some of the most important software especially designed for statistical applications.

66. The aim was not to train COBOL specialists but to allow future statisticians to read and grasp the programmes prepared by their data-processing colleagues and gain a better mastery of the software involved.

67. The representative of the secretariat stressed the need to include in the time-table a section on survey organization and processing. Also, trainees should study an editing software package and a tabulation software package among those available on the computers used by students for practical exercise.

68. In the discussions which followed, one participant said that learning several languages at the same time would be difficult. It would be better to master just one. Once the trainee had acquired that one language, he would find it easier to go on to other languages, if necessary.

69. Continuing the participant felt that the programme did not take into account recent developments in data-processing, such as word processing. Moreover, FORTRAN and COBOL were out of date. It would be better to begin by teaching BASIC and to introduce new languages like PASCAL and APL. Finally, he proposed that a small committee should be set up to review the content of the programme and propose a new one in the light of the comments made.

70. Another representative thought that the programme was directed not so much towards statisticians as towards data processing specialists working in national statistical services. In that sense, it was ambitions. He also proposed that the element of information dissemination should be stressed.

71. He supported the proposal to set up a small committee to prepare a draft programme which would take into account the proposals made.

72. Other representatives asked the secretariat to clarify the level of the programme and its underlying aim.

73. In response to these questions, the representative of the secretariat explained why FORTRAN and BASIC had been chosen. He recalled his introductory remarks, namely, that the two languages might be mutually exclusive. Each centre could make its own choice, depending on the compiler used on the systems. The same was true of the specialized software.

74. The representative of the secretariat explained that the programme was at the level of Ingénieur des travaux statistiques (ITS). The aim was to provide future statisticians with a training in data-processing which would facilitate dialogue with their data-processing colleagues at national statistical offices and to some extent allow them to take over themselves certain applications.

75. The representative of the secretariat supported the proposal, made by one participant and supported by another, to set up a small committee to prepare a programme which would take into account the comments and suggestions made and which would be sent to the participants for comments before its finalization.

76. A Committee to carry out the above mandate was composed of the following members:

Mr. O. Baldé, (ENSEA, Abidjan)
Mr. D. Benzine, (ECA, secretariat)
Mr. L. Bourras,(ITPEA, Algiers)
Mr. K. Bryson, (ISPC)
Mr. R.M. Loynes, (ISI)
Mr. V.E. Muba, (EASTC, Dar-es-Salaam)
Mr. J. Schwartz, (France)
Mr. G.B. Wetherhill, (University of Kent)

Demographic training at STPA centres
(Agenda item 6(d))

77. The Director of IFORD introduced the item on the basis of document E/ECA/STPA/DM3/6 which contained the report of a meeting of experts on the teaching of demography in schools of statistics in French-speaking African countries, organized in June 1982 at Yaounde.

78. Supplementing the presentation by the Director of IFORD, the representative of RIPS also made a statement describing the graduate diploma and Masters degree programmes and summarized the content of the centre's syllabus in demography.

79. In the discussion which followed, several participants described in broad terms the aims and contents of the demography courses taught in the centres they represented. These centres included the University of Botswana and the International Statistical Programme Centre (ISPC) of the United States Bureau of Census. The object of those statements was to supplement the remarks in document E/ECA/STPA/DM3/6 presented by IFORD and to make known the work of the centres concerned.

80. One participant stressed the need to clarify the discussion by distinguishing between the aims of teaching demography to statisticians and the aims of demographic specialization.

81. It was pointed out that the meeting should concentrate on the teaching of demography to statisticians and not consider centres like IFORD and RIPS which specialized in demography.

82. One participant, referring to the demographic training of ITS, stressed:

- The need for indirect methods of estimation, in view of the underdeveloped state of civil registries in Africa;
- The administrative aspects of data collection;
- The importance of sample surveys in data collection.

83. The representative of the Overseas Development Administration said the centre for Population Studies and the David Omen centre at the University College of Cardiffs through his agency, were ready to co-operate with STPA centres by providing them with teaching materials. The ISPC representative said ISPC staff could work with STPA Centres to jointly prepare appropriate teaching materials. He also said that his centre could help with the translation into French of certain basic teaching materials, if so requested.

84. In reply to a question, the Director of IFORD stated that the entry competitive examination was opened to holders of one of the following qualifications: a degree in geography, sociology, economics or mathematics, a diploma of ingénieur des travaux statistiques or a diploma equivalent to one of these two. In reply to another question, he indicated that the problem of recognition of the diploma awarded by the Institute had been solved in most of the user African countries and was being settled in the few countries where the situation was not yet clear.

85. Discussion of this item ended with a request to the secretariat to convene a meeting of IFORD, RIPS and the Population Division to map out in broad outline the objectives and contents of demography courses for statisticians at the intermediate level (ITS).

86. A preliminary document prepared by this meeting could be sent to the STPA Centres for comment. Later, a model demographic programme could be worked out for the intermediate level of statistical training. This could be discussed at the next meeting of directors.

Programme of workshops and seminars for 1984-1985
(Agenda item 6(c))

87. In presenting reference doc. E/ECA/STPA/DM3/7, the representative of the secretariat outlined the problems of coordinating the selection of subjects for short-term training periods, the use of a single language and the financing of activities, He drew attention to the advantages of organizing such activities within the countries of the region.

88. Some representatives of STPA Centres, at ECA's invitation, introduced their programme of short term training activities and gave the reasons behind the selection of subjects.

89. The representatives of the Ecole nationale supérieure de statistique et d'économie appliquée (ENSEA) in Abidjan and the Statistics Department of the University of Ibadan informed the meeting that the Centres were prepared to host seminars, workshops and short courses which may be organized by associate centres in Africa. The representative of CESD indicated that, jointly with the Munich Centre and SOEC, CESD planned to organize in 1984 a training workshop on micro-computer for statisticians from Indian Ocean countries. This workshop might be financed by the Commission of the European Communities.

90. Participants felt that an effective system should be set up to improve overall coordination of short-term training activities in order to avoid duplication and thereby make optimum use of the limited resources needed to implement those activities.

91. The representatives of training centres emphasized the problems of financing short-term training activities and expressed the hope that donor agencies with the necessary support would be forthcoming.

92. The representative of the Munich Centre informed the Meeting that his Centre intended to organize for the first time in 1984, a seminar for directors of ACP statistical offices in both English and French so as to provide an opportunity for a better exchange of views and experiences. He hoped that the Collège de statistique de Dakar and his Center would be able to coordinate the statistical data processing courses that the two centres planned to organize in 1985. He announced that the four month courses of the Munich Centre will deal with the following topics: 1984, price statistics; 1985 agriculture statistics; 1986, national accounts.

93. The representative of the International Statistical Programmes Centre informed the meeting that his centre could organize overseas workshops on various topics in English, French or Spanish on a national or regional basis. He indicated that his centre was prepared to consider favourably any request from STPA centres to host such activities.

94. The representative of the Applied Statistics Research Unit of the University of Kent informed the Meeting that his unit would organize courses in agricultural sample surveys in the next two years. He asked any interested persons to contact him and requested STPA centres to express their needs for organizing short-term training activities

95. One of the representatives of the Institute for Social Studies presented the general training programme of the Institute and the six-month post-graduate programme designed for students in the production and use of data in the context of planning.

96. The representative of the Statistical Office of the European Communities (SOEC) stated that multi-purpose seminars were organized in Florence, Italy in which ACP countries could participate. A consultation meeting had also been organized at the Munich Centre between various European institutions organizing short-term training activities. A liaison document published by the organizers will help to co-ordinate thos activities.

97. The representative of the Overseas Development Administration indicated that the Sussex Institute of Development Studies had been organizing short-term economic statistics courses for several years and might do so again during the next two years. The Institute would communicate details of such courses and seminars to ECA and to member countries through the normal channels as soon as the curriculum had been finalized.

98. He specified further that the United Kingdom could provide assistance only when requested by governments and not by institutions. It was however possible, at the request of a country, to finance the participation of a national in a course organized in another country. There was no question of allocating funds to a training institution for it to award scholarships therefrom.

99. The representative of the Commission of the European Communities felt that it would be most helpful to conduct short-term training activities in user countries as well as a wider dissemination of this subject. He underscored the importance of refresher courses as part of training and the need not to divorce these short-term training programmes from academic training. The Commission may, at the request of governments, finance such activities on a national or regional basis. He stressed the need to provide a precise cost estimate when requests for financing were being made.

100. The representative of the French Ministry of External Relations, Cooperation and Development expressed the interests of the Ministry in short term training particularly in practical subjects. The Ministry had provided financial support for the organization of two seminars in 1983 on budget-consumption surveys and on environmental statistics. A frequency of two seminars per year might be compatible with current budgetary constraints. He would answer the question on the financing of short-term training activities when technical and financial assistance was being discussed.

101. The representative of the Institut national de la statistique et des études économiques (INSEE) drew attention to the technical constraints of co-operation with France. The Institute accorded pride of place to training. However, in order to achieve maximum efficiency, co-ordination was necessary since the experts recruited for training often happen to be the same persons who operated in other areas of statistical and economic activity. In order to make co-operation activities pay off, the Institute had suggested that an assistance request such as that of the Collège statistique de Dakar to organize training seminars using the simulated approach might be considered under the CESD trainer-training programme for instance, in order to bring together several countries and STPA Centres.

102. Her Institute had also provided bilateral assistance to the Institut national de statistique et d'économie appliquée (INSEA) of Rabat. To her knowledge, the Demography Development Group had not been informed of the proposed IFORD seminars and she feared that the seminar planned for 1984 might not materialize.

103. The representative of the Commonwealth Fund for Technical Co-operation (CFTC) stated that assistance was available to Commonwealth countries or their nationals under regional or subregional short-term training activities provided they were organized in Africa by STPA Centres or other training institutions. Owing to the complexity of formalities, he invited all interested persons to contact him. Workshop activities would stress training aspects. CFTC had provided such assistance in facilitating participation of trainees from Commonwealth countries in Africa in a training workshop on environment statistics convened in Nairobi, Kenya, in 1982.

104. The representative of Sweden stated that his country provides financial assistance for training activities mainly through bilateral technical support. He stressed the importance of including the use and the users of data in training activities for different statistical projects i.e. censuses.

105. Finally, the secretariat pointed out that ECA was not a donor agency. The regional component of STPA financed by UNDP was only a part of the entire programme on which African countries and donor agencies alike should concentrate their efforts. The regional component had its own budgetary constraints and part of its available funds could not be allocated to the running of short-term training programmes without jeopardizing the Programme as a whole. ECA would provide assistance in the form of

expertise for organizing such training programmes and undertake the informal preliminary negotiations with donor agencies once the secretariat was informed of short-term training projects planned by STPA Centres.

G. JOINT EEC/ACP/ECA STUDY OF STATISTICAL TRAINING NEEDS FOR AFRICA
(Agenda item 7)

106. This agenda item was introduced by the authors of the report from the Statistical Office of the European Communities (SOEC). The meeting had before it the following documents:

E/ECA/STPA/DM3/8.1	General Report
DM3/8.1/Ad.1	Addendum
DM3/8.2	Report on English-speaking STPA Centres
DM3/8.2	Report on French-speaking STPA Centres
DM3/8.3	Computing needs of Statistical Training Centres in Africa

107. These documents were presented together. The background to the study and the way in which it was carried out were described. In connexion with the study, visits were made to most ACP African countries and STPA Centres during which discussions were held with government authorities and directors of STPA Centres and data were collected.

108. This study has had three main objectives. The first was to heighten awareness by government authorities of the importance of comprehensive and reliable statistics. The second was to collect information, country by country, on the basis of which it would be possible to estimate statistical training needs for the next ten years by type and level of training. The third objective was to evaluate the resources which would be necessary to satisfy these needs, the ways in which these resources might be provided by external assistance, and the conditions required to ensure the effectiveness of such assistance in improving African statistical services.

109. A good statistical apparatus was considered necessary by every country visited, but the study attempted to examine how this feeling had been translated into action. Various important constraints on statistical development were identified, many of which were general constraints on the public service but which had specific implications for statistical services. These include shortage of manpower, budgetary limitations and poor organisation of the statistical system. However it was felt that despite these problems, the statisticians themselves could do more in order to sell their wares and prove their usefulness.

English-speaking countries

110. One of the most striking aspects has been the growth of national training facilities in the years since the STPA was set up, not only at middle-level but at first degree level too. This trend seemed likely to continue. Exemption from the examinations of the Institute of Statisticians (U.K.) was suggested as a means of validating the national middle-level training courses being developed so that the qualifications thus obtained might be acceptable to STPA Centres.

111. All countries stressed that their greatest need for statistical training facilities abroad was for postgraduate training in applied statistics. The areas most often mentioned were agricultural statistics, national accounts, sampling and statistical computing. At present courses outside Africa have to be used, which may often be less relevant to the needs of African countries. It was felt that the STPA could have an important role to play in meeting these needs.

French-speaking countries

112. For sub-professional staff many national courses are being developed and it has been felt that a clear distinction has to be made between "adjoint technique" and "agent technique" particularly as regards the duration of the training. Coordination between countries is needed for the "adjoint technique" courses because of the need to achieve the same standard for admission to the ITS competition.

113. As far as professional staff are concerned, more emphasis is needed in the training on statistical computing, agricultural statistics and general economic statistics. The existing and planned capacity of centres offering ITS courses matches the projected needs. Coordination by CESD has been greatly appreciated. The lack of representation of certain countries on ITS and ISE courses could be remedied by preparatory courses. For ISE level training, the smooth transfer of the CESD training to two STPA Centres should be considered.

114. Additional requirements identified in both language groups were: workshops on the use of micro-computers in statistics; seminars bringing together statisticians and their various partners, as well as statisticians from different countries.

115. A general conclusion of the study was that each country has to decide its own training priorities and whether to allocate the fellowships at its disposal to statistics. It was also felt that administrative procedures had to be streamlined. The recommendations on support for each country and each STPA Centre are listed in Document E/ECA/STPA/DM3/8.3.

116. It was pointed that as well as the reports on each STPA Centre, reports had also been produced on each country in which the basis for making projections were fully described. In fact the study has produced an enormous body of information and the authors wished to thank Directors of Statistics and of STPA Centres for their cooperation in providing such detailed data.

117. The discussion of the report were structured as follows:

i) General recommendations as contained in E/ECA/STPA/DM3/8.1

ii) Computing needs as contained in E/ECA/STPA/DM3/8.3

iii) STPA Centres activities as contained in E/ECA/STPA/DM3/8.2

iv) All other recommendations having financial implications as contained in E/ECA/STPA/DM3/8.1 Addendum.

118. To have balanced discussion for the meeting genrally, item (iv) above was transferred for discussion under agenda item 8 while discussion on STPA performance, procedure and criteria for admitting new centres to the STPA was covered under item (iii) using also Document E/CN.14/ECO/132 relating to the establishment of STPA.

1. General Recommendations

119. The general report generated a lot of discussion. Although the report was generally welcomed, some representatives questioned a number of its conclusions. They felt that sometimes the relationship between cause and effect had been incorrectly drawn and that the statements made were not true for all countries. For example, the conclusion of the report that availability of scholarships was not a stumbling block was questioned.

120. However, the authors pointed out that the remarks made in Document E/ECA/STPA/DM3/8.1 represented a synthesis of materials from country reports and by their nature could only be generalisations and not applicable to each and every country.

121. From the various contributions to the discussion, it was clear that much need to be done, possibly, inform of research and investigation, to reduce the controversies generated by the issues of:

(a) adequacy or inadequacy of training, including differentials between availability of middle level and professional level manpower;

(b) retaining of trainees in their countries of origin;

(c) relationship between supply and demand for statistical manpower; and

(d) relationship between statistics and policy.

122. In his contribution, the Representative of the Commission of the European Communities pointed out that the study had been commissioned in order to provide a framework not only for their own activities in the field, but also those of other donor agencies, in particular, those Member countries of the communities. This point was underlined by the Representatives of those Member Countries who were present, and certain other donor agencies.

2. Computing needs

123. It was felt that the use of computers in STPA Centres was a major issue. There were some discussion of the technical merits of the report and varying views were expressed. The need for taking into account the availability of appropriate software packages in selecting the equipment to be installed in the various centres was considered of a central issue. An exchange network for software was suggested, though there was no agreement on whether the centres themselves should write their own software or rely on softwares developed by associate centres or others.

3. STPA Centre Activities

124. Directors of STPA Centres were invited to comment on the report on their institutes. Some wished to correct errors which had been made in these reports and undertook to put these in writing to the authors. Developments which had been made since the reports had been written were also reported by certain Centres.

125. The Director of the ISAE, Kampala, felt that too negative an impression had been given of the situation and activities of the ISAE. The authors agreed that the ISAE had made a very important contribution to statistical training in the region and that the postgraduate training they were trying to develop could fill an important gap in the training facilities available. Nevertheless, they felt that there were important constraints on the uses made of ISAE by other countries which were not the habitual users of the Institute.

126. The Director of EASTC informed the Meeting that user countries of EASTC have not indicated the need for a course leading to membership of the Institute of Statisticians (UK). He feels that he will encourage the more competent diploma holders of EASTC to proceed to B.Stat at ISAE Kampala in line with the integrated training programme by Eastern Africa. It was explained that the suggestion that this centre might consider mounting a course leading to exemption from Stage III of the examinations of the Institute of Statisticians stemmed from the fact that no such course is available on a full-time basis in the UK. Many people study for these examinations up to and including Stage II by correspondence and it was to meet their needs that this suggestion was made, not as course aimed at Diploma-holders. This was the case, especially in West Africa which currently is not the main client of EASTC.

127. Some participants felt harmonization of middle level training in the English-speaking countries should be worked out within the framework of STPA Centres using the Institute of Statisticians as a point of reference with respect to levels of teaching, etc. The Institute of Statisticians, has a more significant and cost-effective role to play in fostering institutional development in Africa as in the case of EASTC.

128. In response to question raised by the Director of the Collège Statistique in ENEA, Dakar in connexion with the needs of that centre, it was agreed that a separate report should be prepared on this centre using material from the report on Senegal.

129. The Director of IAMSEA stressed the fact that some countries which did not have the status of privileged users did not contribute to the budget of the Centre meant that the latter could no longer continue to accept students from these countries with the risk of jeopordising, at least for some of them, the expected results within the framework of the STPA.

130. Concerning performance of STPA, no detailed discussion was made because of lack of necessary information. A participant felt that a study could be made available by the secretariat on the first five years of STPA for the next meeting of the directors. But it was clear that significant progress has been made.

131. On the procedure and criteria for admitting new centres, various contributions were made in conclusion, the recommendations contained in E/ECA/STPA/DM3/2 were accepted but to be used flexibly. Existing STPA Centres were asked to make efforts to offer international services especially in the area of making positions available to other countries in their training facilities and encouraging these countries to use the positions.

H. TECHNICAL AND FINANCIAL ASSISTANCE IN THE FIELD OF STATISTICAL TRAINING (Agenda item 8)

132. The secretariat introduced document E/ECA/STPA/DM3/9.1 by explaining that UNDP and UNFPA were the two primary sources from which the United Nations obtained funding for its technical assistance programme. It was explained that fellowships for training were either included as part of country projects which were funded from UNDP, IPFS of individual countries or from specific country projects which were funded by UNFPA. The latter projects were limited to demographic and related issues and population censuses.

133. In summarising the document the secretariat stated that in addition to training which were funded by UNDP and UNFPA, there were two other types of training. The first was training which was funded through funds provided by the United Nations Department of Technical Cooperation for Development out of its regular budget. Such training was limited to on-the-job and does not cover institutional type of training. The secretariat indicated that a number of statisticians, cartographers and a computer programmer had either been trained or were being trained in another developing country. The meeting was told that an increased enthusiasm was now being shown by countries for this type of training. However, the secretariat pointed out the fact that because the United Nations Secretariat had been limited by the appropriate Committee of the U.N. General Assembly to a zero increase budget for the biennium 1984-85, it was unlikely that increased funds will be available for this type of training.

134. The second type of training which was not funded from either UNDP or UNFPA funds was training which was being conducted in the USSR. This was funded by the USSR's contribution to the UN Technical Assistance Programme. Since this contribution was available only in Roubles and this is unconvertible into other currencies, the secretariat explained that such training takes place only on the USSR.

135. The secretariat identified two main problems which were encountered with fellowship training. The first was that it was difficult for some national statistical offices to identify suitable candidates for training in certain specialized fields of statistics. Secondly, there was a tendency apparently due to lack of enough suitably qualified candidates for a country to nominate the same candidate more than once for related fellowship training over a short time period. Finally the secretariat requested the meeting might wish to conduct its discussion according to the points enumerated in paragraph 40 of the document under discussion.

136. In reply to a suggestion from a participant that the United Nations should provide funds for training statisticians in data processing techniques and the use of software packages, the secretariat welcomed the suggestion especially because of the availability of a variety of software packages which can now be easily used. The secretariat however pointed out that it is for national statistical offices to demand that fellowships for such training be included in their country projects at the time this is formulated.

137. In reply to another question that the United Nations should consider extending some kinds of fellowships to STPA Centres rather than exclusively to national statistical offices, The secretariat agreed with the participant but again pointed that the sources of funds were primarily country oriented and that these were provided by either of the two donors in the manner that has been described.

138. A participant pointed out that different titles were used in the document for a particular STPA Centre and requested that in future the official title should be used. The secretariat noted this.

139. The meeting expressed the hope that with an improvement in the global economic picture, increased funds may be made available for additional fellowships for training.

140. The secretariat also reported on the follow-up action undertaken in connexion with the request submitted to the Commission of the European Communities by the ACP Council of Ministers for support to STPA through the regional programme of the European Development Fund (EDF).

141. The representative of the Commission of the European Communities stressed that the participation of EDF in STPA was not unique but should take its place among the efforts of the members of the Community, of the other donor agencies and of the member States of ACP themselves. This participation would be financed under the regional co-operation arrangements of the Lomé II Convention, which would end in 1985. Taking into account the results and the progress made, a second intervention could be envisaged under the next Convention.

142. Turning to the question of supplying data-processing equipment to the STPA Centres, the Commission considered that it was a matter of central importance but one which did not appear yet ready for financial action; action of harmonization seems effectively necessary on this question.

143. The other fields of EDF action would include, in the light of the recommendations of the joint study (document E/ECA/STPA/DM3/8.1, paragraph 92):

- The provision of calculating machines to the Centres and assistance in preparation and organization of the common competitive examinations for the francophone Centres;

- Assistance in various forms to the STPA Centres in Africa, according to the precise indications given in the report, including assistance for the training of trainers and for the Africanization of teaching personnel in the Centres;

- Support for refresher courses, seminars and workshops designed to encourage a dialogue between the producers and users of statistics and support for the preparation of teaching materials.

144. The training of intermediate staff at the national level and the award of fellowships came within the purview of the national programmes. They could therefore be financed in accordance with the procedures laid down for financing national projects. However, the STPA would remain the frame of reference which would make it possible to avoid duplication and to guarantee the necessary coherence.

145. A decision by the Financing Committee of EFD might be made towards mid-1984 and an initial mobilization of funds might be made towards the beginning of 1984 academic year.

146. The representative of the Ministry of External Relations, Cooperation and Development, France, indicated that the training of statisticians from the developing countries, and for obvious historical reasons, of students from francophone Centres had always been considered as one of the essential aspects of French co-operation with those countries. In the years to come, and in spite of the unfavourable economic situation, France intended to maintain and, if possible, increase its assistance activities.

147. Under its long-term technical assistance programme, France would directly finance 18 teacher posts for the school year 1983-1984. Those numbers would diminish slowly but regularly during the years to come. But, side by side with the reduction in those numbers, France planned, if the Centres so desired, to rechannel its assistance towards high-level training (practical training, statistical data processing, statistical and economic analysis).

148. Under its scholarship programme, France would maintain its global effort. But it wished to point out that the scholarships were included in the national programmes of the recipient countries. Therefore, their allocation for the training of statisticians depended in practice on the priorities laid down by the States themselves.

149. With regard to its subsidies to training Centres, France planned to maintain those intended for the organization of practical surveys by students in the field, which could be considered as one of the essential aspects of statistical training. On the other hand, it hoped that requests for consumer items and minor items of equipment would gradually be reduced since they normally come within the regular budget of the Centres.

150. With regard to provision of data-processing and similar equipment, France, which had already helped to equip several Centres, hoped that harmonization of technical standards, as indicated in paragraph 141, be undertaken particularly regarding the operating system.

151. As regards documentation, France would continue to provide a regular supply of French teaching materials. During the next three years, it would concentrate on the provision of materials for training Centres dealing with intermediate staff.

152. As regards permanent training, France would not be able to meet all the requests transmitted to it, because of the special efforts being made by many Centres which were now opening for training intermediate staff. During 1984, France would envisage only support for refresher courses in CESD, the acceptance of trainees in the technical services of INSEE, and the organization of one seminar for technical staff of statistical services. The same remark applied to the possible transfer of the first division of CESD to Africa. Such a move could benefit from the support it deserved only after a special effort had been made on behalf of Centres training technical assistants and after a certain number of posts of technical assistant had been freed by the Africanization of trainers of ITS and similar staff.

153. CFTC support is available to statistical training centres and/or individuals in/from the developing countries who are member states of the Commonwealth. Such support is availed either in the form of technical assistance or fellowships and training. CFTC offers no equipment support.

154. Technical assistance support is administered by the General Technical Assistance Division of CFTC and fellowships and training support by the Fellowships and Training Programme of the Human Resources Division of the Commonwealth Secretariat. Each of these two units have a point of contact in the government administrations of the developing member States of the Commonwealth. Indeed in some cases a common point of contact serves both the units of CFTC. All requests for Technical Assistance and fellowship and training support to CFTC have to be routed through these points of contact for initial processing at the country level before being forwarded to CFTC.

155. Fellowship support is accorded for training essentially in developing countries and not the developed member States of the Commonwealth. Training support includes support for training of trainers, regular training in both long and short term and seminars and workshops with a bias on training.

156. In the case of support for participation of commonwealth subjects in seminars and workshops, such support can be accorded to facilitate participation in Seminars and Workshops organized by associate members of STPA both from within the Commonwealth and outside so long as the workshops and seminars are convened in developing countries i.e. within the African region, preferably in a member State of the Commonwealth.

157. CFTC is a fund set up through voluntary contributions of all the member States in both developed and developing, of the Commonwealth.

158. The representative of the Overseas Development Administration referred to the statement on technical assistance to statistical training in paper DM3/9.2. He commented on the statistics of trainees between 1981 and 1983 which was distributed at the meeting . He pointed out that these indicated not only the amount of assistance to the training of statistician provided by the U.K (rather more than US$2,000,000 per year)but also the demand made by countries for such training.

159. He stressed that the table referred only to fellowships and did not include the cost of staff and any equipment provided to training institution in Africa nor the cost of any training staff and related equipment provided to national statistical service.

160. The Representative of the International Statistical Programs Center (ISPC) of the U.S. Bureau of the Census indicated that the 1984-1985 training programs to be offered in Washington by ISPC during the training year which begins on 4 September 1984 will be announced in a training booklet which will be distributed worldwide in January 1984. These programs are similar in content and objectives to those offered in the recent past, with greater emphasis on incorporating microcomputer training into the curricula in the various subject matter specializations. It is tentatively planned to announce a third joint Master's degree program in addition to the current Combined Degree Program leading to a Master of Science in Social and Economic Statistics and the Demography Degree Program leading to a Master of Arts in Demography. The proposed new program would lead to a Master of Arts in Administrative Science with a concentration in Management Information Systems. An expanded special purpose program on training of trainers will be offered. This will enable staff members of national, sub-regional and regional training centres to work with ISPC staff to jointly prepare training materials and to undertake other activities to strengthen their programmes. These other activities include participations in special courses, seminars, and professional meetings on latest approaches to, and techniques for, the development and implementation of technical training.

161. It should be emphasized that ISPC is not in a position to offer financial assistance to participants in its Washington-based or overseas training programmes. Fellowships for participants in those programmes may be sought from a number of different donor agencies including the U.S. Agency for International Development, United Nations Development Programme, Food and Agriculture Organization, World Bank, and other UN specialized agencies; agencies of the participant's own Government, and organizations which have committed resources to support Africa statistical development. In all cases, applications for fellowships should be made through appropriate government channels by the agency in which the prospective participant is employed to the representative of the sponsoring agency in the participant's country.

162. The Applied Statistics Research Unit (ASRU), University of Kent is a self financing unit which offers a range of services: statistical analysis, consultancy, research projects, courses, and software development. Together with the department of statistics at the University, it has a range of experts, some of whom have direct experience of developing countries. For many years it has had contracts with the ODA which involved staff travelling to developing countries, and some staff have spent prolonged periods at overseas centres. When mounting short courses, the ASRU has access also to other staff, as in the case of the short course on Agricultural Experimentation being mounted in Bangladesh in January 1984. The ASRU has no funds of its own for direct financial assistance, but given projects such as short courses, consultancy etc., requested by an STPA Centre, funds can sometimes be found from other sources. It has a very applied emphasis, and is very keen to help developing countries wherever possible.

163. The possible areas of assistance are as follows:

- Applied Statistics Research Unit (Data Processing Experience)
- A user friendly survey analysis program (Software development)
- Sample surveys and rural development course
- Provision of special courses
- Summer School in Statistics, 1984.

164. International Statistical Institute (ISI) has no significant financial resources, and therefore has a different role to others offering assistance. Its real resource is in its members: about 1200 experienced and senior statisticians of all kinds throughout the world are members, and in particular the Directors of National Statistical Offices are members ex officio. Thus it can help in the making of contacts with experts, and in similar activities, but for substantial assistance external financial input would be required as was the case for the World Fertility Survey.

165. In order to provide a framework for these or other kinds of activity, the ISI has created various structures. It has an Education Committee, which in turn has three Task Forces, one of which is concerned with Statistics at Teriary and Technical Level. It has also recently set up an International Statistical Research Centre, the Director is Professor van de Kaa. In any connexion in which it is felt that ISI may be able to help an approach to Professor van de Kaa, to the Director of the Permanent Office, or to the Observer at this meeting (R.M. Loynes) would be welcomed.

173. This presentation did not provoke lengthy discussion. Participants made corections to the information contained in the second edition of the Directory of Statistical Training Centres Participating in the Statistical Training Programme for Africa. The secretariat was requested to harmonize the presentation of the publication better. One representative stressed the usefulness of the Directory of STPA Centres and hoped that programmes on course organization at the Centres would subsequently be included in the publication. It was also requested that associate centres should be included in the Directory.

J. OTHER BUSINESS
(Agenda item 10)

174. When the secretariat asked where and when the next meeting of Directors of STPA Centres should be held, participants agreed on Addis Ababa, during the first week of November 1985.

175 One participant asked the secretariat to arrange to inform Centre Directors sufficiently in advance of the agenda so that the Directors could have the opportunity to propose possible additions of items they would wish to see discussed.

RESOLUTION NO. 4 (XXXII) 83

OF THE 32nd SESSION OF THE COUNCIL OF ACP MINISTERS

HELD IN BRUSSELS AND IN LUXEMBOURG FROM 03 TO 08 OCTOBER 1983

STATISTICAL TRAINING PROGRAMME FOR AFRICA

The Council of ACP Ministers,

RECALLING the request submitted in 1980 to the European Economic Community (EEC) for support to the Statistical Training Programme for Africa (STPA) through the Regional Programme of the European Development Fund (EDF).

NOTING with pleasure that the Study of the Needs for Statistical Training in Africa has been completed recently as a preliminary EEC response to the request referred to above.

RECALLING that the full impact of the programme is dependent on the provision of adequate teaching staff and the availability of student fellowships.

1. URGES the Commission of the European Communities to give its final response to the above request at its earliest opportunity so that the operational activities planned can start at the beginning of 1984 to cover the five-year period 1984-1988.

2. EMPHASIZES the importance of making provisions for the training of african teaching staff in a way consistent with the requirements of individual Statistical Training Centres in Africa.

3. URGES that student fellowships be planned well in advance, that these requirements be taken into account when formulating country programmes and that the procedure for fellowship awards be facilitated.

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Third session of the Joint Conference of African Planners, Statisticians and Demographers

Addis Ababa, 5 - 14 March 1984

REPORT ON JOINT EEC/ACP/ECA STUDY ON THE NEEDS FOR STATISTICAL TRAINING IN AFRICA

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GENERAL REPORT

I. BACKGROUND AND OBJECTIVES OF THE STUDY

1. The Statistical Training Programme for Africa (STPA) was adopted at the tenth session of the Conference of African Statisticians in 1977. Its objective was to ensure that the region has a permanent supply of trained staff for the statistical and other services of governments as well as the private sector. It was conceived as a ten year programme aiming to make Africa self-sufficient in statisticians. Fifteen regional training centres participate in the programme (see annexed list of statistical training centres participating to STPA) and a further five European institutes are associate members. The STPA is coordinated by the Economic Commission for Africa.

2. Various constraints prevented the STPA from achieving its full potential in relation to the aim of self-sufficiency for African statistical services. Three main constraints were identified:

(1) Under-utilisation of existing facilities due to lack of information on courses offered, admission requirements and financial resources;

(2) Loss of trained personnel to other government departments, private sector, and to more developed countries;

(3) A tendency for many training courses to be too mathematical.

3. However, it was the first constraint, in particular lack of financial resources, that led the ACP Council of Ministers at its 26th Session in 1980 to approve, in principle, presenting the STPA to the European Community for financial assistance in the following forms:

(1) Finance of fellowships to enable students to attend the regional statistical centres;

(2) Finance of lecturer posts at the regional training centres to enable African counterpart lecturing staff to be trained;

(3) Finance of fellowships to train African lecturing staff for the regional training centres.

4. It seems that in the past the number of scholarships available has probably been adequate for the number of places available on STPA courses. However, lengthy application procedures and complications caused by the admission regulations have meant that these scholarships have been under-utilised.

5. In order to formulate an effective response to the longer-term requirements of the STPA, the Statistical Office of the European Community (SOEC) was asked to carry out a study to analyse the needs for statistical training in Africa over the next ten years. It was to take account of studies carried out under the aegis of the ECA, by

SOEC and CESD in 1975 covering French-speaking countries, and that done by the ECA for the STPA. The study has had the full support of the ECA and of EC Member States. The latter have also seen the study as valuable in guiding their own programmes on this field.

6. This study has had three main objectives. The first was to heighten awareness by government authorities of the importance of comprehensive and reliable statistics. The second was to collect information, country by country, on the basis of which it would be possible to estimate statistical training needs for the next ten years by type and level of training. The third objective was to evaluate the resources which would be necessary to satisfy these needs, the ways in which these resources might be provided by external assistance, and the conditions required to ensure the effectiveness of such assistance in improving African statistical services.

7. The first two stages were carried out during visits to the majority of ACP African countries, and separate reports have been prepared on each country and each STPA centre visited. The country reports analyse the status of the statistical system, the employment of statisticians and training patterns already established. The centre reports describe the background and activities of the STPA centres. The present report summarises the detailred analyses presented in the individual reports. It has two main sections; the general report and the conclusions and recommendations made for each country and each STPA centre.

8. The visits were carried out by the following people:

Visits to selected countries to heighten awareness of the importance of statistics:

English-speaking countries: Prof. J. Durbin, The London School of Economics
Dr. P. Erba, Director, SOEC,
Mr. W. L. Booker, Head of Statistics Division, ECA

French-speaking countries: Dr. V. Paretti, President of the CESD
Dr. S. Ronchetti, Director, SOEC.

Data-collection visits:

English-speaking countries: Miss J.J. Church, Statistician, on leave to SOEC from ODA for the study, (accompanied by Mrs. M.TLALE of ECA Statistics Division for the visits to West Africa)

French-speaking countries: Mrs. A.-M. James, Cooperation Department INSEE
Mr. J.-J. Branchu, Cooperation Department, INSEE
Mr. B. Tissier, Cooperation Department, INSEE,

Mr. S. Ronchetti, Directorate E, SOEC,
Mr. A. De Michelis, Directorate E, SOEC,
Mr. D. Byk, Directorate E, SOEC.

9. The present report has been prepared by Mr. D. Byk, Miss J.J. Church and Mr. D. Kouassi (of ECA Statistics Division) in collaboration with the various people who participated in the country visits. The final draft has been written by Mr. Byk and Miss Church.

10. During the course of the project, various difficulties arose which limited its geographic coverage.

(1) The Maghreb countries have not been taken into account. The Directorate General for Development of the Commission of the European Communities ruled that since the African countries were not signatories to the Lomé Convention, the request from the ACP Council of Ministers did not include them. However students from ACP countries might study in the centres located in those countries.

(2) Angola and Mozambique also are not signatories to the Lomé Convention. Nevertheless the ECA offered to collect and anlyse information to assess the situation in these countries but this was not possible for administrative reasons. Together with other countries such as Guinea-Bissau and the Cape Verde Islands, they do not use either of the languages of instruction at STPA centres. It would doubtless be very useful to carry out a similar study to assess the needs of these countries but the fact that it has not been possible to include them in this study does not invalidate the conclusions drawn concerning countries using existing STPA centres.

(3) Security conditions caused the cancellation of the visit to Chad and the postponement of that to Upper Volta. (The visit to the latter country was postponed because a change of government took place just as the mission was about to be carried out).

11. In describing the objectives of the study and the ways in which it was carried out, it is important to underline two essential aspects:

(1) Although one of the major concerns was to collect quantitative information on training, another aim no less important was to gather qualitative information in order to understand the nature of the problems which lie behind the figures. The overall effect of these problems has been that for the last twenty years or so, many African statisticians have been trained but African statistics have not made significant progress and in some cases have even regressed.. One of the aims of this study has been to discuss this aspect, as well as the purely quantitative one on which previous studies concentrated.

(2) The factors which should govern the orientation, or re-orientation if that should be necessary, of statistical training and the support which it should be given must be sought by analysing the way in which the statistical system functions, its relationship with the general government machinery, with users and producers of data and the image it projects.

II. GENERAL VIEWS OF NATIONAL AUTHORITIES ON OVERALL TRAINING POLICIES AND THE PRIORITY GIVEN TO STATISTICS

12. The general impression gained during the course of the missions from contacts made either with political authorities or with high-level government officials, was that a good statistical apparatus is considered necessary by every country. It was recognised that to achieve this, statistical training must be an important part of the professional training programme which itself is accorded high priority. The enthusiasm shown for improving statistical services appeared genuine and was widespread. However, one must wonder whether this attitude results at least partly from a knowledge of the sphere of interest of the visitor.

13. In general, few countries analyse their training needs in any detail. Planning in the area of training has not yet become a reality beyond merely stating broad principles and objectives. Failure to quantify training needs is illustrated by two characteristics which apply to most countries:

(1) the university system is producing many graduates in sectors where employment prospects are now limited,

(2) it is very seldom that a country can provide statistics on the numbers of scholarships awarded in the past by source of funding or subject of study, and even less frequently on how many will be available in the future.

14. These characteristics, particularly the first, are certainly not confined to the developing countries, but in countries where investment in training is of the utmost importance and often very costly as well, such weaknesses have important consequences. This is recognised by the countries visited and in many of them manpower planning activities are getting off the ground at the moment, with manpower surveys in progress or about to be started, among them Cameroon, Liberia, Zambia and others. Some countries are studying the procedures for the internal distribution of training awards to consider ways of rationalising and improving them, for example Ivory Coast.

15. Most countries visited have already got a fairly extensive national training programme, although the standard and scope varies greatly from country to country. For such countries the case for training and personnel abroad has to be examined critically. This is particularly so since it has become more and more clear that the benefits of training abroad to the country itself are far from guaranteed. There are innumerable cases of people trained abroad who do not return to their own country, whatever subject they have studied. Many countries are now questioning the cost-effectiveness of using foreign training facilities abroad and this is already leading to certain new policy criteria. Fellowships for training abroad are no longer awarded for studies which could be pursued at a local institution. There are some types of training, however, which certain countries cannot yet undertake and which would be much too difficult or costly to mount on a national basis, but in the majority cases this is no longer true. Thus, for example, training for middle-level

and support staff is generally available within almost all countries or, if it is not yet available, its development would be feasible. The idea is accepted that is less cost-effective to send staff abroad for training at this level.

16. In countries where middle-level and other support staff training is not available locally, the fairly high cost of training abroad has resulted in a shortage of trained staff. This is a major cause of the imbalance one can observe in the pyramid of staff in post in statistical services. There are often adequate numbers of professional staff trained either to ITS or first degree level, or to ISE or post-graduate level, but a chronic lack of sub-professional staff. It is clear that is a need to redress the balance whilst taking account of cost considerations. Various countries are aware of this and have already taken steps to tackle the situation, for example, the Cameroon, Somalia, Zimbabwe, and others, already have middle-level training programmes. Others such as the Congo, Niger, Madagascar and Sudan, are hoping to develop similar programmes.

17. At this level, and even more importantly, at the professional level, the method of training differs between the English-speaking and French-speaking countries. In the former, statistical training is provided almost exclusively by the University system, whereas the latter tend to train statisticians in specialised schools which are often independent from the University system. There are, of course, exceptions particularly in the French-speaking countries. For example, in Benin, the National Institute of Economics forms part of the University and in Zaire training courses used are often run by the University. In English-speaking countries, sub-professional training is often organised by the national statistical service itself.

18. The two systems are not without influence on each other and there is a general wish to harmonise training course at various levels. Such harmonisation exists amongst the French-speaking countries as a result of the system of coordination supervised between the various schools by CESD. It is also a concern of the English-speaking countries which, perhaps in the light of the francophone experience, are now seeking ways of improving harmonisation which has not existed in the past, mainly because of the large measure of autonomy possessed by their Universities in all aspects of their activities.

19. In all African countries, the statistician as a person is generally held in high regard throughout the public service. This may produce difficulties for the statistical service who often see their most able staff transferred or promoted to other duties in the civil service outside statistics.

20. This ability of the statistician as an individual to work with colleagues from different professions and to undertake different types of work, unfortunately is often not reflected in the contacts between the statistical service and its various partners. Instead, these links leave much to be desired, whether they be with organisations concerned with the day-to-day running of the economy, such as the Ministry of Finance and the Central Bank, or with the Ministry of Planning, which often takes a longer term view. The statistical service is often in the same Ministry as the Planning authorities but this can be "stifling" for statistics.

An extreme case is that of Guinea, where the fusion of the two departments has reduced statistical production practically to zero. However, the contacts are equally poor between the statistical service and the producers of raw data such as private enterprises and government departments whose administrative records are potential sources of statistics. It appears that at both the beginning and at the end of the statistical chain, the links between the statistician and his partners are often inadequate.

III. CONSTRAINTS ON AFRICAN STATISTICAL DEVELOPMENT

21. In many developing countries, there are several important constraints on the proper functioning of the public service. These may take the form of:

(1) A general freeze on salaries, which are often already low compared with those outside the civil service;

(2) A general freeze on recruitment in the civil service, which may be justified by the rapid growth in the past, but which affects all sectors equally irrespective of whether they are under- or over-staffed;

(3) The absence of manpower planning in the public service;

(4) A lack of sufficient funds to cover necessary recurrent costs other than personal emoluments.

All these constraints may affect the statistical services and they are discussed in more detail below. However, it is important to realise that they are not the only sufferers as similar problems affect many parts of the civil service.

Constraints at the Governmental level

22. As has already been said, lip-service is readily paid to the importance of statistics but this is rarely translated into action. Government authorities regard statistics as a necessity but seldom a priority. The location of the statistical service in the government administration and the status of statisticians illustrate this. Often under the direction of the Ministry of Planning, the statistical service generally takes second place to the planners and is seen by them simply as the provider of figures. It is not easy for an organisation placed in a position such as this to take on the central role in national statistical development.

23. Behind this rather discouraging picture, there is a lack of coordination between statistics and other government activities. Certainly many countries agree that statistics are necessary, and therefore so are statisticians, but do not appear to understand why this should be so. Thus in the day-to-day running of the economy the usefulness of the statistical apparatus is not appreciated, often because when information is requested, the statistician can seldom provide it. Statistical activities are expensive and government has to be able to see the benefits which will accrue from a costly exercise before giving it support. It has to be recognised that although statistical information should have an important role in the economic management of a country, statistical activities too often appear to involve only

large-scale operations such as census and lengthy surveys which have large budgets but only produce information with a considerable time-lag, when the results are already of historic interest only or even of no interest at all. There is thus a difference between the service needed and that which often exists, and as a result statistics have been "relegated" and made subordinate to planning, which by its very nature is a long-term activity. Thus statistical activities tend to be grouped with those which governments know should take place but are not convinced of their use, and so consider them to be luxuries. This aspect will be taken into account in the recommendations of this report.

24. The consequence of this attitude to statistics is the inadequacy of the resources allocated to statistical activities, in terms of manpower, buildings, equipment and finance to cover other recurrent costs. The effects of the scarcity of each type of resource on the activities of statistical services will be examined. It should also be noted that statisticians are often disadvantaged in their career development (with slower promotion than similar professional groups) and occasionally in their salaries (for example, allowances may be lower). They may also be intellectually isolated in the sense that they have few contacts with the international statistical world. The connection between these factors and the quality of the statistical system is illustrated by their different characteristics in various countries. Thus those countries where the statistical service enjoys a favoured position have a well developed system of statistics, for example Cameroon, Kenya, Senegal, whereas on the other hand a "wealthy" country such as Ivory Coast has a mediocre statistical system because it pays its statisticians poorly and gives little priority to the Statistical Office.

Constraints at the national statistical service level

25. The shortage of finance and the lack of priority or interest in statistical activities are well illustrated by the problems often faced by statistical services when they have to use government common services, such as a central computer bureau or the government printer. These central services tend to give priority to relatively straightforward administrative work with tight deadlines, such as government payroll rather than to statistical work which is more specialised and takes up more resources. In addition, even when provided, the service is often not very satisfactory: administrative procedures may be lengthy, equipment may be poorly maintained and may thus break down frequently (this is particularly true of computers), and they may have manpower problems. All these difficulties upset the cycle of statistical production, causing delays and preventing continuity in the work of the statistical service. It would often greatly assist statistical services to have their own equipment, or a less centralised service, and would often cost less. This is true of the production of publications, but the contrast is even greater in the area of data-processing with the development of mini-computers and, above all, micro-computers.

26. Shortage of finance to cover the acquisition of such equipment thus hampers the work of the statistical office. This would not require large sums of money, for less than 40,000 ECU, it is now possible to equip a statistical office with a micro-computer, peripheral equipment, and a supply of spare parts. Shortage of finance also

creates bottlenecks in the collection of statistics when it is insufficient to cover the costs of maintaining the necessary infrastructure (let alone its acquisition in the first place). Work may be hampered by the lack of transport equipment, funds to pay enumerators, and inadequate or unsuitable buildings.

Shortage of manpower

27. This problem has many facets. Without doubt the most important at the present time is the general shortage of qualified middle-level personnel and of statistical clerks, which has already been noted above. The imbalance between the number of staff at these levels and those at the professional level means that professional staff find themselves doing sub-professional work, which considerably limits the possibility of creating a permanent, well-organised statistical capability. It is the middle-level staff who organise and carry out the work which lies at the foundation of all statistics, the collection of raw data and the analysis of questionnaires. It is at this level that fieldwork must be planned and monitored and this stage of the work cycle is crucial. Certainly there are always middle-level posts in a statistical office, but they are often vacant. If they are filled, the incumbents frequently have no training in statistics and so cannot apply consistency checks in a questionnaire, or have to follow instructions blindly since the techniques being used are unfamiliar to them. Similar problems exist at the clerical level as well. Very often clerical staff have a poor educational background in mathematics, or even in arithmetic, having left school after the equivalent of O-level or BEPC. This means that enumerators and statistical clerks need some short-term in-service training in the basic techniques of data summary and presentation. Recommendations for action on training in both these areas will be made in this report.

28. Many countries have an acute shortage of professional staff for example, include Ghana, Sierra Leone, Tanzania, Rwanda, Zaire and others. The causes of the shortage may be the inability to create new posts, insufficient finance to cover the salaries of all the existing posts or the difficulty in recruiting suitably qualified personnel The last problem is exacerbated by high staff turnover in these grades as the professional statistician seems to be in great demand to undertake a wide range of work. This favourable image, combined with his frequent "de-professionalisation" in the government statistical office, encourages the statistician to leave to take up other, often more responsible, posts which may bring considerable salary increases. Turnover of staff at this level disrupts the statistical service by weakening the supervision of work in progress and reducing its ability to take on new work. Loss of experienced staff means that to a certain extent the service limits its activities to routine work in order to maintain existing work programmes and does not seek to innovate. This routine statistical production may not be providing the most urgently needed or most useful information needed either for the day to-day monitoring of the economy or for socio-economic development planning.

29. Turnover of professional staff may not be a problem when there is proper staff management. The key factor here is undoubtedly the establishment of a well-structured scheme of service, not only for professional staff but for sub-professional grades too. In-service training should be integrated into the scheme of service to

provide incentives for success at each level. This type of training also provides a way to avoid having to send staff away on training courses (often abroad) which also distrupts the work of the statistical service.

30. Apart from the difficulties associated with equipment, data processing activities are also constrained as few statisticians have knowledge of statistical computing techniques and, more generally, by the lack of trained programmers and systems analysts in the statistics office. The solution to this problem lies not only in the recruitment of data-processing personnel(when such people actually exist in the country) but also in the ability of statistical personnel at all levels to tackle and resolve computing problems. It is necessary to bring the computer and its user much closer together especially with the type of equipment now available, particularly in regard to statistical computing. Statistics and computing are such closely related disciplines that integration of the two could be rapidly achieved as soon as new technology is introduced. Training has an important role to play here and this point will be returned to in the recommendations of this report.

31. In the situation of manpower shortage described above, which is typical of very many African statistical offices, technical cooperation from abroad often brings only a temporary benefit and may even have a detrimental effect in the long-term. The natural reaction of the local statistical service is to use such an officer to fill a gap in their own staff or to provide expertise not available locally. He thus substitutes for a local statistician without having a counterpart to train. When the expatriate departs, he leaves an even larger gap and this may disrupt statistical activities even more.

Poor organisation of the statistical system

32. In many countries there is insufficient coordination in the development and implementation of statistical work. Very rarely does an effective body exist to coordinate such activities. This role often falls to the national statistical office, but its place in the overall government machine does not allow it to undertake the task effectively. Thus projects may be developed by different government departments which virtually duplicate each other, resulting in considerable waste of resources. Where a system of coordination exists in theory (either a National Council of Statistics or a unified statistical service) it is usually under the auspices of one ministry which may find difficulty in imposing its priorities on other ministries unless it controls the funds for all statistical activities or has the backing of a higher authority for example the Prime Minister or President.

33. One particularly serious aspect of the lack of planning and coordination of statistical activities is that several different ministries may have a permanent field-force of enumerators. Nothing is worse that a field-force whose time is not fully occupied because of lack of forethought and lack of coordination between different organisations engaged in survey work (this is true of the agricultural enumerators in Senegal).

34. Inefficient collaboration with the various users of statistics may also result in part from poor organisation of the statistical system. The person wanting information may not know where to obtain it and even the various bodies producing

statistics may not be aware of each other's activities. At the stage of data collection, organisations and individuals who are the source of raw data may be faced with a plethora of requests for the same information from different organisations. This must be an important cause of their non-response and must lead them to question the need for statistics and therefore the need to provide the information for which they have been asked.

35. The last aspect of this type of constraint to be raised here is the imbalance in the distribution of statisticians both within government administrations and geographically within the country. Regional statistical services in a country are often ill-equipped, a situation which results largely from the general shortage of sub-professional staff needed to staff them.

Constraints at the international level

36. International organisations (aid agencies and international statistical organisations) also have some responsibility for the present situation. African statisticians sometimes feel that their activities are dictated more by the requests made by external bodies rather than the real needs of their country. In addition to this concern, which is not without foundation, it is true that international recommendations often stress the need for time-consuming and ambitious projects such as censuses. Even in developed countries, this type of project is difficult to mount and is often subject to long delays. Such recommendations may encourage countries, to embark on operations which may not be in the best interests of their own statistical development. It has already been said that care should be taken to avoid all that is neither useful nor productive. Funds are often available for large-scale, costly exercises, but they may not contribute towards a real strengthening of the statistical office. Donors have been willing to commit an enormous amount of resources to censuses but the failure to provide the data required by other government departments is often raised at the end of each such project. Directors of statistics who continue to seek and accept such funds must be, in part, also held responsible for this.

37. A second criticism of external aid is the apparent lack of coordination, and even duplication, between the contributions of various donors, whether in financial contributions to projects, award of scholarships, or even requests for statistical information. Although statistical services are often tempted to follow several avenues at once to obtain funds, it would be in their interests as well as those of the donors if external aid were to be better coordinated with all other activities in the statistical office, whether internally or externally funded.

The responsibilities of the statistician

38. The constraints described above affect the quality of a statistical service and the impact it can make, but the statistician cannot be absolved from all responsibility. It is possible with few resources to produce results, and indeed it is necessary to do so if additional resources are to be made available. Statisticians must be convincing; they must prove their usefulness, they must concentrate much more on the dissemination and utilisation of the data they produce; they must "sell" their wares.

For example, it is not enough just to publish tables of figures. Statisticians must provide some primary analysis indicating how they may be used, what their significance is and what they mean. Those who are asked to take part in a survey, particularly enterprises, should be given some feed-back which is useful to them or at least shows them the importance of participating in the production of statistics. In being the primary user of the statistics he produces, in concerning himself with their utilisation and dissemination, the statistician will begin to prove his worth and be more likely to obtain more resources. There is too much of a tendency to be content with data collection work, to be too anxious about mathematical rigour and to leave others to disentangle the figures produced. This situation results to some extent from the type of training statisticians receive and this report will consider these points in its recommendations.

IV. CURRENT STAFF POSITION AND OVERALL STATISTICAL TRAINING REQUIREMENTS FOR 1983-1987 AND 1988-1992

39. The current employment of statistical staff is shown in the statistical annex to this report. Similar data have been collected outside this study and these were taken into account in order to arrive at our estimates.

40. The tables show two main imbalances:

(1) Even if there are insufficient professional staff, there is an even more chronic shortage of middle-level staff;

(2) Some countries have found difficulties in getting a sufficient number of their staff through the entrance examinations for training courses, or in having sufficient numbers obtain qualifications. The basis of this problem lies mainly in their preparation either for the examinations or for the courses, in particular their mathematical knowledge. This is true even if, in some cases, a contributory factor may be the procedure for awarding scholarships which prevent them from taking up places on training courses.

41. The demand for statisticians in a country is strongly linked to the availability of local training facilities, in other words, supply tends to govern demand. This is the case in a country such as Ethiopia where statisticians may be found in many government and parastatal organisations because the University of Addis Ababa has been producing a steady supply of statistics graduates for some years; and also in Rwanda where many more statisticians have been trained since IAMSEA was set up.

42. Training needs have been estimated by country and by level of training course and these are presented in tabular form in the annex. These estimates are based on data collected during the missions or obtained from other sources. Where such estimates already existed in the country, these were taken into consideration various factors have been taken into account for each country, the number of staff ideally necessary, the number of posts actually available to be filled, the type and capacity of statistical training facilities available locally. If the number of statisticians ideally needed is very large, this has been modified to take account of

the ability of the statistical service to recruit the necessary staff, otherwise the estimate would be a purely theoretical one.

43. Finally, it is important to note that few countries had really addressed the problem of estimating what their future training needs would be. Therefore the data for each country could well be revised upwards or downwards according to decisions they might take in the future, or training plans they might formulate. It is the country itself which has to decide whether or not it wishes to recruit and train statisticians. There are ways in which it may show such willingness, for instance in programming training fellowships. This point will be returned to later in this report.

V. WAYS OF SATISFYING STATISTICAL TRAINING NEEDS

44. Reference has already been made to the difference between English-speaking and French-speaking countries in their systems of training. This section of the report will discuss the two groups of countries separately.

English-speaking countries

Middle-level

45. The number of staff needing training at this level is such that local training courses are the most efficient way of meeting the demand, except for the smallest countries (such as Seychelles and the Gambia). Of the nineteen anglophone countries, eleven have already developed such courses (five at local STPA centres) and a further three have plans to do so. It has always been an objective of the STPA that wherever possible middle-level training should be available on a national basis, and it appears that this has already largely become a reality in the English-speaking countries.

46. The methods of organising this type of training differ from country to country. Those courses run by STPA centres are full-time with the students generally residing at the institution (i.e. EASTC, University of Ibadan). Most of the others are taught in evening classes (e.g. Ethiopia, Swaziland) and one country is offering the course partly in working hours, partly in the students' own time (Zimbabwe). There seems no best solution and each country has to decide which type of arrangement suits it best. The resources needed for the proper functioning of such a training programme usually include one full-time training officer, or more depending on the size of the programme, finance to pay honoraria to part-time lecturers, small items of equipment such as calculators, simple teaching aids and a properly equipped calss-room prefereably with other rooms available to enable a class to be split up for small group work. Many of the courses already set up do not have all these resources at their disposal and specific recommendations are made in individual country reports on the type of support each needs.

47. In developing middle-level training programmes over the last few years countries have not always studied similar courses being taught elsewhere in the region and there has been little harmonisation in the development of syllabuses. This has meant that there are now a wide range of Certificates and Diplomas awarded from country to country with little to indicate to a potential employer or an institute of higher education what standard the holder has reached. The ECA have recently produced Guidelines on Syllabus for middle-level personnel which suggest the type of material which should be covered at this level. What is needed in addition is an international recognition of the qualifications each institution awards as a means of comparing the standard reached between countries. This could be provided by a link between the courses and the qualifications awarded by the Institute of Statisticians (UK), an arrangement already used by EASTC (on whose syllabuses the ECA Guidelines were largely based) and the Zimbabwe in-service programme. The Institute is prepared to discuss the syllabus of any course with its organisers and may agree to give exemption from their own examinations (up to a certain level) to successful candidates after scrutiny of marked scripts. Thus the local examinations may be considered equivalent to a level of the Institute's own qualifications. All the current and potential course organisers were very interested in investigating the possibility of such a link.

48. It is clear that the main demand for places on middle-level courses at STPA centres will come in the future from the country in which each is located. Demand for places in foreign centres will be restricted to a few countries such as The Gambia and Seychelles because of the impracticality of setting up local courses, and those such as Kenya having special links with a regional centre. These demands will be able to be met by a single centre.

First degree

49. First degree courses in statistics either as a single subject or as part of a combined subject degree are now available in many national universities. Apart from five STPA centres, there are five more countries having University Departments of near future. Therefore at this level too, most training needs are now being met by local institutions. However there are two problems which arise in most countries. First, statistical services consider the courses taught are too mathematical in working statisticians. Second, it seems difficult for employers of statisticians to recruit new graduates, many of whom appear not to join the statistics profession at all.

50. These two problems have led many statistical services to develop a training pattern which does not rely on direct recruitment of new graduates. Instead they prefer to train school-leavers on-the-job and in formal middle-level courses and to chose the most promising to sponsor on first degree courses, preferably those with a practical orientation such as the B.Stat. at Makerere University. It is felt that professional staff trained in this way have a better grasp of work in a national statistical service and are more easily retained in the service. However the whole training cycle takes a very long time to complete, sometimes unnecessarily long because universities often do not give sufficient exemptions for the training already received. Students may find that they must start virtually at the beginning of a degree course and thus repeat a great deal of material already covered in their

middle-level course. Statistical services have found that universities outside Africa are much more flexible in this respect. Recognition of middle-level qualifications by the Institute of Statisticians should enable statistical services to make a stronger case for exemptions from the early stages of university courses. Statistical services should also put pressure on university authorities to give a more practical orientation to statistics courses and could themselves become more involved, for instance by offering to give a series of lectures on their work programme or involving students in survey work. Advantage could be taken the fact that there is now a general realisation by governments that universities should gear their courses much more closely to the country's manpower needs.

51. Although the need for practical orientation and the need to dovetail degree courses with middle-level courses apply to the majority of university courses, whether at STPA centres or not, the latter is particularly important for centres which hope to attract students from a number of countries. At the present time there are anomalies caused by the conflict between general university regulations on exemptions and those which centres themselves would like to operate. The resolution of these problems should be given high priority, in order that training cycles may be as efficient as possible.

52. Most of the five university Departments of Statistics who participate in the STPA have in the past trained far more students from the country in which they are located than foreign students; some have had applications from foreign students very rarely. The development of statistics degree courses outside these centres has been such that this situation is bound to continue, and the demand for places at regional centres by foreign students will decline.

53. There is however one area of need which is not being covered by any institution inside or outside the STPA. A gap has been caused because no UK institution now offers a full-time course leading to the final examination of the Institute of Statisticians, Stage III. If passed this gives Membership of the Institute, generally considered to be the equivalent of an honours degree in statistics. In the past many Africans have studied for the earlier stages of the Institute's examinations by correspondence or have gained exemptions through in-service training courses, but have studied for Stage III in the UK since it is extremely difficult to complete this final part by correspondence. In countries where this pattern has been widespread there is dismay at the new situation. It would be extremely helpful to them if a course could be developed at an STPA centre which accepted candidates with a pass or exemption at Stage II and at the end of which they were qualified for Membership of the Institute.

Postgraduate diploma/M.Sc.

54. All countries stress that their greatest need for training facilities abroad is for postgraduate training in applied statistics. Such courses are required to re-orientate statistics graduates whose first degree was largely mathematical and to give training in statistics to those whose degree was not in statistics. The areas of applied statistics most often mentioned were agricultural statistics, national accounts,

sampling and statistical computing. At present courses outside Africa have to be used and not only is the training often less relevent than that which might be offered in Africa but also there is a higher chance that the trainee will not return to the statistics service.

55. Demography is the only area of applied statistics in which such courses have been developed in Africa, at RIPS and at the Cairo Demographic Centre, and plans for similar courses exist in some universities (for example the University of Addis Ababa). The relative ease of obtaining fellowships at the two regional centres has means that large numbers of demographers have been trained, which in some countries has produced an imbalance in the specialist knowledge of statisticians in post. Demand for training for demographers seems likely to stabilise at the current level, or perhaps decline somewhat, and it is now important to develop similar courses in other branches of statistics.

56. The STPA could have an important role to play in meeting these needs. Courses need to be developed which cover general statistical methods (such as sampling and statistical computing) but which also allow specialisation in a particular area of applied statistics. It would be undesirable to have only one centre offering such courses: at least two would be preferable, each offering different options. Although they would have to be linked to a University in order to have proper recognition of the qualifications they would award, it will be most important that they have the status of regional institutions in order to have as much autonomy as possible, for instance in the choice of candidates admitted. Such centres would need support in terms of buildings and equipment, and in the initial stages probably technical cooperation too. At present Makerere University is the only centre envisaging such a development, although because of the situation in Uganda some countries may not wish to send their staff there, at least in the short-term.

French-speaking countries

Sub-professional staff

57. The best way to respond to the urgent training needs at this level is to make training courses available locally, perhaps with the exception of the very smallest countries.

58. Two regional centres, the ENSEA at Abidjan and the ISPEA at Yaounde, offer such training at present. In the Congo a similar type of training course should begin in October 1983. In Niger and Madagascar similar projects are under consideration and at ENAE in Dakar and at ENE in Benin comparable courses are also available. Countries such as Rwanda, Zaire, Central African Republic, Gabon and Togo might also consider setting up similar programmes.

59. Two categories of staff may be distinguished, the "adjoints techniques" and the "agents techniques".

(1) For "adjoints" training takes two years. In order to distinguish clearly between the various grades of staff, and in particular to avoid confusion between "adjoints" and ENE, those for training as "adjoints" should be

recruited who have left school one year before the baccalauréat. The Guidelines drawn up by the EAM, which reflect the curriculum at Abidjan and that at Yaoundé, can form useful reference material on which to base a syllabus. The primary function of the "adjoint" is to organise the collection and production of statistics.

(2) For "agents", training should be fairly short (one year maximum), very practically orientated, and should take account of the level of education of the candidates. The best recruitment point is at the end of the first stage of secondary school (in the third year, or just after BEPC).

60. It is agreed that in both cases cooperation between local training institutions and statistical services should be encouraged. The resources needed to set up such training facilities are fairly modest: one or two classrooms, a local course organiser at the level of ITS with perhaps a technical cooperation input from abroad for a short period; a budget to cover coaching materials and honoraria for part-time lecturers (these honoraria expenses are about 2,500 BCF per year).

61. In the case of "adjoints techniques", continuation and development of a standard syllabus is not only useful but also necessary because after a few years' work experience they will, because of their qualifications, be possible candidates for the ITS entrance examination. It is therefore important to avoid too great a disparity between countries. On the other hand, although harmonisation of training for "agents techniques" and exchange of information about courses would certainly be useful, it is less urgent.

62. The basis for effective coordination already exists. The entrance examinations for "adjoints techniques" and "agents techniques" are now and will continue to be, organised on a communal basis in many French-speaking countries, either by the ISPEA or by the ENSEA. This link is to be maintained, probably with OECD support, in respect of level of recruitment and content of syllabus. Other aspects are for individual countries to decide. More generally, coordination which brings together French-speaking and English-speaking countries is one of the tasks of the STPA.

63. The development of national training facilities has two particular implications for the three French-speaking STPA centres. Firstly they should support these projects, secondly the two that already offer training courses at this level will need to make more places available for candidates coming from the countries in which they are situated.

Professional level

64. In order to provide training which corresponds more closely to that which statistical services and other employers of statisticians say they need, the STPA training centres offering professional level courses (CESD, ENSEA, ISPEA, LAMSEA, Collège de Statistique de l'ENEA, IFORD) should re-orientate their activities somewhat. More priority should be given to statistical methods, that is methods and concepts of data collection as well as methods of preparation and presentation of statistics. More attention should be paid to data processing, dissemination of data

and data analysis. The emphasis on particular areas of statistics in the training courses available does not always reflect the needs of countries. Thus, whereas training may be widely available in a specialisation such as demography (particularly with the existence of a centre such as IFORD), there may not be sufficient opportunities to study ways of collecting and analysing statistics on the food situation of a country (agricultural statistics, statistics of consumption and so on).

ITS courses

65. The developments which are at present underway (new buildings at ENSEA, IAMSEA and probably at ISPEA development of an ITS course in Benin, a similar project under consideration in Madagascar, the opening of the ENEA at Dakar to students coming from the Sahel countries), and more effective use of the existing facilities will virtually double the number of places available on ITS courses in French-speaking Africa. This growth spread over a number of years (probably about five) will enable the centres to respond adequately to the requirements of the countries they serve.

66. In this analysis of supply of training places, we have also had to examine the demand, in other words the number of candidates capable of following the courses. At the moment certain countries are under-represented on an examination of the distribution of students on courses by nationality. The usual reason is that these countries lack candidates capable of passing the competitive entrance examination, primarily because of their weakness either in mathematics or in numuerical technics. To overcome this handicap it would be useful to set up a system of preparation for the examination for countries such as Niger, Mauritania and Central African Republic. Spread over a period of less than a year, depending on the level, these preparatory courses could be set up using local training institutions or integrated with local "adjoints techniques" training courses. Another possibility of improving the "score" of certain countries would be to attract economics graduates to take the ITS course, particularly since such graduates are often amongst those who find it difficult to obtain employment in many countries.

67. The high-standing of the current ITS courses and the widespread recognition of the qualifications awarded by the centres offering the courses stem mainly from the coordination of the level of recruitment and curriculum which are made possible by the CESD competition. These practices (common entrance competition, planning of courses and so on) should continue and should be extended to other ITS courses which are beginning, or being planned, in various countries (e.g. Senegal, Benin, Madagscar).

68. The role of the STPA centres is therefore to continue their current activities, taking account of the type of changes suggested above,

ISE courses

69. To increase the capacity of courses at this level, the transfer of this training from CESD in Paris to at least two centres in Africa will be necessary. The present situation is that the two centres which could most easily consider taking on this level of training are ENSEA at Abidjan and ISPEA at Yaoundé. This will not be an

easy operation, and is one for which careful preparations must be made if the transfer is not to be accompanied by a fall in standards. The standard will depend not only on the quality of lecturers but also on the intellectual environment of the Centre. Following the example of the transfer of ITS training, it is a question of making the transfer progressively over a period of time. The start of the transfer might take place during the next five years, and it should be completed within ten years. The process should involve a common entrance examination, as with ITS, and cooperation input to support them whilst the new courses are being developed.

70. Even more than for the ITS competition, certain countries have great difficulty in finding candidates who can pass the ISE entrance examination set by CESD (eg, Central African Republic, Mauritania, Niger, Chad, Gabon, Burundi, Rwanda). It is thus even more important to develop preparatory courses lasting at least a year, since the level of the competition is determined by the programme of "Mathématiques générales". Preparatory courses can be set up in the framework of existing institutions (e.g. secondary school, undergraduate university course...).

71. Those STPA centres which might in the future offer these courses should take this into account in planning their future programme and equipment (this is already the case at ENSEA and at ISPEA). For these centres it will also be necessary to provide technical cooperation to set up the courses when the time comes. As regards CESD, the training offered at present could be somewhat re-orientated along the lines suggested above.

Additional requirements

72. Refresher training courses need to be organised as frequently as possible within African countries both for reasons of cost and in order that they should have as wide an audience as possible. Countries identified the following areas in which courses are particularly needed:

(1) familiarisation of statisticians with the new opportunities for processing and dissemination of data offered by micro-computer technology;

(2) courses for users of statistics and providers of primary data (such as company accountants, hospital administrators, school administrators, extension workers in the Ministry of Agriculture or in regional development authorities) to familiarise them with statistical methods and the way in which statistics may be used. In this way closer links may be forged with the statistical service, and opportunities may be created for working together;

(3) exchange of experience between statisticians from different countries on various aspects of statistics and of technical information.

These aims could be achieved in various ways including seminars, workshops, and study tours for statisticians to observe work methods in other African statistical offices.

VI. PROCEDURES FOR HANDLING RESOURCES

73. Three principles have guided the recommendations on this subject:

(1) countries should decide on their own priorities;

(2) administrative procedures should be streamlined;

(3) the activities of STPA centres should be supported.

74. All questions of resource allocation are determined by political decisions. This is true of the creation of new posts, allocation of financial resources, and also the distribution of training fellowships. In the case of some of these resources, such as training fellowships, they are not of course always funded by the state itself. Nevertheless, it is the government which must decide whether or not it wishes to recruit and then train statisticians, and it is the government who must choose how it wishes to use scholarships funded either internally or externally It is in the importance it places on different types of training that the government express its priorities for the various types of manpower. Such decisions cannot be delegated to an external organisation, even a regional one, particularly since if this were so there would be no guarantee that the country could create employment for its returning trainees. It is unrealistic to imagine countries giving up their autonomy in this way. The distribution of scholarships provided by aid agencies such as the EDF, the FAC or ODA through the British Council, is normally determined by the country itself in this way. By these means, each country must take responsibility for deciding where its own priorities lie.

75. The difficulties encountered in obtaining fellowships for statistical training lie not only in the overall number of awards available, but also in administrative procedures. Requests may be made too late, may arrive too late, or may become lost in a bureaucratic morass. It is here that the major obstacles lie for many countries, rather than in the number of scholarships available. During the course of some missions, it became apparent that these two problems may be reversed in their importance. For instance, the administrative procedures of some aid agencies are so cumbersome that what is necessary is a better forecast of requests and streamlining of the procedures for awarding fellowships. It is suggested that at the beginning of each year the recipient country should communicate to the various aid agencies the number of scholarships it wishes to reserve for statistics by level of course. After consultations if the supply of scholarships does not match the demand, the donors should then set this number of scholarships to one side and award them, following accelerated procedures, as soon as the STPA centres decide which candidates they will admit (on the basis of entrance competition results or after examination of application forms).

76. A more rational procedure of awarding scholarships such as this should reduce the difficulties of STPA centres which, at present, may not know how many students can be expected and whether their courses are full up to the last minute before their terms begin. Scholarships cover an important element of their running costs, since they are often the source for the payment of teachers' salaries, at least in part. However, no less important are other funds to improve their operations,

primarily to cover costs such as: teaching materials (micro-computers, calculators, library books, journals, etc.), buildings, special lecturers to assist for example with new courses (particularly to help set up ISE and postgraduate courses), and the training of trainers. A number of centres require more lecturers and engaging expatriates is not always the best solution. It may cost up to three times more to employ a European lecturer than an African on local terms, as is the case at IAMSEA for example, and many countries have the potential to provide their own lecturing staff providing attractive terms of employment can be offered. A possible solution would be to give centres the finance to pay the salaries of national or other African lecturers. It will also be necessary to assist countries in the setting up of courses to train sub-professional staff, for example by providing training officers and teaching materials. For universities manpower assistance can best be provided by developing a link with a Department of Statistics in a European university.

VII. CONCLUSIONS AND RECOMMENDATIONS

The statistical system in ACP African countries

77. Countries themselves, as well as aid agencies, must make efforts to ensure that the training of statisticains produces real results in the improvement of their statistical systems and avoid waste caused by the isolation of statistical activities. In order to achieve these aims, statistical services must be better organised with precise but comprehensive work programmes, and should have units spread throughout the geographic regions of the country and in ministries. However, it is vital that the activities of the whole statistical system should be coordinated in an effective way. Such coordination should cover all aspects of the development of the system, decisions on statistical priorities and harmonisation of classifications and methods. Such coordination may be implemented administratively by the national statistical office seconding staff to other government departments. However, apart from this coordination "at the grassroots", it is also vital that a high-level coordination body should exist which can take decisions at the political level and can enforce them on all those bodies engaged in statistical work. Whether this be a national council for statistics or a planning body it must have the authority of the head of government.

78. In order that this edifice should not be an empty shell, statistical activities must be accorded the resources necessary to achieve the objectives set for them. This undoubtedly means adequate funds to cover other recurrent costs, adequate manpower, and their own computing facilities (mini- or micro-computers) and printing facilities (offset or similar equipment).

79. Improvement of the statistical system is a matter for statisticians themselves to tackle, not for other people. They must "sell" their product, they must make sure that the statistics they produce are meeting the needs of the country. In order to do this they must be the first to use their statistics, making the data more accessible and comprehensible by presenting it well and doing some primary analysis. They must be more concerned with the speed and continuity of their work, giving priority to that which is useful and can be done quickly rather than to large-scale exercises whose results are difficult to use. Their work must demonstrate the value of investing in statistics.

80. In order that all these efforts should not be in vain, the statistical service should be sufficiently attractive that staff are happy to stay in it. To achieve this, better man management is needed, taking full account of the role of training. This should be possible because of the small numbers of staff involved and might be a useful pilot project for the rest of the public service.

81. In March 1983 at Addis Ababa the ECA Conference of Ministers set up a relationship under which African governments are called upon to attach more importance to developing their statistical institutions, and to pay particular attention to the need to create good conditions encouraging the use of the statistics.

This step is encouraging because an improvement of the link between statistics and economic management and planning is based above all on the will of the countries concerned.

Although outside aid is indispensable, no progress can be achieved in most cases without a real will on the part of the countries themselves. This will can be expressed in many ways (coordination of the statistical set-up, planning of resources, etc.).

Priorities for statistical training

82. The most important gap in the training available at present is that of courses for sub-professional staff to remedy the shortage of staff at this level. Highest priority should be given to developing such training programmes locally in each country, this being the most cost-effective way to overcome the problem. The length of time needed to train middle-level staff and clerical staff will differ from country to country according to the educational level of the candidates, and whether they are taught through full-time or part-time studies.

83. For professional training either at ITS/first degree level or ISE/postgraduate level, stronger emphasis should be given to courses in statistical methods rather than mathematical statistics, with more attention paid to ways of processing and presenting information in order that graduates should have a better idea of how to organise statistical work. The accent should be laid on data collection and analysis in those sectors most important in African economies, such as agriculture and food supply.

84. In order to give secondary school-leavers a better preparation for statistical work and further training in statistics, various additional types of training are needed, for instance, teaching of basic arithmetic and mathematics to clerical officers and future middle-level officers, and courses to bring candidates up to the level required to be admitted to degree courses.

85. Other types of training are needed for the providers of raw data (company accountants, administrators, etc.), for the users of statistics (those concerned with the day-to-day management of the economy, such as the Ministry of Finance and the Central Bank, or the planners) and for the statisticians themselves, (short courses

in statistical computing, exchange of experience between countries, and so on). These are necessary in order to encourage better contacts and understanding between all three groups, and will complete the training picture.

86. The development of middle-level training courses should be accompanied by harmonisation of the syllabus taught and the level of qualification or recruitment. This is necessary in particular to facilitate progression from one level of training to the next in order to avoid repetition of material and to minimise the time spent on training courses. For the African region as a whole this is a task which the STPA advisers could undertake. For the French-speaking countries the CESD can play this role of coordination because of its experience of the common competition for ITS courses. In the English-speaking countries, harmonisation of middle-level qualifications might be developed within the framework of the Institute of Statisticians (UK).

Resources needed for implementation

87. Setting up local training facilities for sub-professional staff is dependent upon the willingness of the country to do so. The resources needed to implement such a project are modest: a full-time local professional statistician is needed as a training officer, perhaps with the assistance of an externally funded training adviser when the course is set up; two or three classrooms; stationery and small items of equipment such as calculators;and funds to pay part-time lecturers (about 2,500 ECU a year). The students on these courses will almost certainly already be in employment and will therefore receive their normal salaries, but if not they will require a scholarship.

88. In more general terms, countries have to decide whether or not they wish to employ statisticians at each level, professional and sub-professional. If they wish to do so, they must translate this desire into action by making sure that adequate numbers of fellowships are awarded for the study of statistics, whether they are financed by the country itself, or by bilateral or multilateral donors.

89. In order to avoid administrative delays and bottlenecks in the award of fellowships by aid agencies, each country should plan its requests, reserving a certain number of fellowships for statistical training. This should be matched with a streamlining of procedures to minimise the time taken to award the "reserved" fellowships as soon as students are accepted for courses or pass the entrance examination.

90. Practical assistance should be given to the existing training centres to help them to function better. This may take the form of new buildings, equipment or lecturers. Assistance will be needed particularly to set up postgraduate or ISE courses at STPA centres. As far as training of trainers is concerned, the most efficient way to coherent is to allow the centres to recruit trainee teachers to give them a real possibility to acquire a teaching ability.

Follow-up action

91. The employment of statisticians, their training needs and the ways in which these might be met should be kept constantly under review so that the recommendations of this report may be implemented effectively, their results may be evaluated and training programmes may respond to changing needs. It is particularly important for the STPA centres to know that courses are being developed on a national level, not least because their experience could be used to assist statistical services in these projects.

VIII. ACTIONS TO BE PURSUED BY EXTERNAL AID

92. The response to the request made by ACP countries for assistance for the STPA should be so give priority for financing the following actions

a. to provide equipment and other types of support to the STPA centres (financial support to heavy equipment, in particular micro computers, to cover current expenditure...);

b. to make possible an efficient training of trainers, i.e. to allow the recruitment by training centres of trained teachers who might be get a real opportunity acquire a teaching ability,

c. to establish higher level training courses in Africa i.e. the establishment of postgraduate courses in applied statistics in at least two English-speaking centres with a wholly national role and the transfer of the IAW course to at least two French-speaking centres,

d. to support refresher courses, seminars and workshops which bring together all those involved in producing and using statistics, organized in Africa either by STPA centres or STPA associate centres such as the Turin Centre for Advanced Training in the ILO;

e. to assist training which is orientated towards statistical computing, agricultural and food supply statistics and current economic statistics, by providing micro-computers and by financing courses or workshops,

f. to support the setting up of local training facilities for middle-level staff and statistical clerks.

93. In addition, proposals should be made to allow better planning of scholarships and to enable streamlining of the procedures for awarding them. A general improvement of resources allocation procedure would also be needed in order to overcome some development constraints now existing.

94. Actions to be supported by external aid in the countries

		(1)	(2)
BENIN	- development of local facilities for middle level training (AD and AT) (*)	N	S
	- special and refresher courses organised locally (National Accounts, External Trade, Automatic Data Processing - ADP)	N/R	S
BOTSWANA	- no country-specific recommendations		
BURUNDI	- in service courses	N	S
	- creation of local facilities for middle-level training (AD)	N	S
	- preliminary training for candidates for ITS and ISE competitions	N/R	S
CAMEROON	- seminars organised locally for statisticians and users/suppliers	N/R	S
	- ADP refresher courses organised locally	N/R	S
CENTRAL AFRICA REPUBLIC	- creation of local facilities for middle-level training (AD and AT)	N	S
	- preliminary courses for candidates to ITS and ISE competitions	N/R	S
CONGO	- in service training for AT	N	S
	- development of local facilities for middle-level training (AT)	N	S
	- preliminary training for candidates to ITS and ISE competitions	N/R	S
IVORY COAST	- seminars organised locally for statisticians and users/suppliers	N/R	S
	- refresher courses in ADP	N/R	S
ETHIOPIA	- further development of local facilities for middle-level training	N	S
	- supply of micro-computing equipment to Statistical Department of Haile Abiba University	N	S
	- refresher courses organised locally in ADP	N/R	S

(*) AD = Adjoint technique AT = Agent technique
(1) Letter N means that the action concerned has a national character
Letter R a regional one. Both letters confer to the action both characters.
(2) Letter S means the action could be realised in a short period (1-2 years), letter M in a longer one or that it has to be considered after other actions.

GABON	- creation of local facilities for middle-level training (AD)	N	S
	- in-service training for AT	N	S
	- preliminary courses for candidates for ITS and ISE competitions	N/R	S
GAMBIA	- no country-specific recommendations		
GHANA	- development of local facilities for middle-level training	N	S
GUINEA	- creation of local facilities for middle-level training	N	S
KENYA	- no country-specific recommendations		
LESOTHO	- no country-specific recommendations		
LIBERIA	- further development of local facilities for middle-level training	N	S
	- micro-computing equipment, library equipment, (for the University, Statistical Department)	N	S
MADAGASCAR	- creation of local facilities for middle level training	N	S
	- seminars and refresher courses organised locally	N/R	S
MALAWI	- development of local facilities for middle-level training	N	S
MALI	- creation of local facilities for middle-level training	N	S
	- seminars organised locally for statisticians and users/partners	N/R	S
MAURITANIA	- development of local facilities for middle-level training	N	S
	- preliminary courses for ITS and ISE competitions	N/R	S
MAURITIUS	- no country-specific recommendations		
NIGER	- creation of local facilities for middle-level training	N	S
	- seminars organised locally for statisticians and users/partners	N/R	S
	- preliminary courses for ITS and ISE competitions	N/R	S

NIGERIA	- no country-specific recommendations		
RWANDA	- refresher courses organised locally (agricultural statistics, micro-computing)	N/R	S
	- follow-up of the local training for middle-level personnel	N	S
SENEGAL	- seminars and refresher courses organised locally	N/R	S
SEYCHELLES	- no country-specific recommendations		
SIERRA LEONE	- creation of local facilities for middle-level training	N	S
	- preparation for university studies	N	S
SOMALIA	- further development of local facilities of middle-level training	N	S
	- organisation of foreign languages courses to make easier the follow-up of studies	N	S
SUDAN	- creation of local facilities for middle-level training;	N	S
SWAZILAND	- further development of local facilities for middle-level training	N	S
TANZANIA	- refresher courses and seminars organized locally	N/R	S
TOGO	- development of in-service training for AF	N	S
	- creation of local facilities for middle-level training (AD)	N	S
	- refresher courses organised locally	N/R	S
UGANDA	- creation of local facilities for middle-level training	N	S
ZAIRE	- creation of local facilities for middle-level training	N	S
	- refresher courses for ADP	N/R	S
	- preliminary courses for VTS and ICE competitions	N/R	S
ZAMBIA	- re-start of the local facilities for middle-level training;	N	S
ZIMBABWE	- further development of in-service training	N	S
	- creation of a post-graduate training in applied statistics.	N/R	S

95. Actions to be supported by external aid in the STPA Training Centres (*)

Department of Statistics University of Botswana	- support in the reorganisation of the programme	S
	- supply of equipment (micro-computers, reprographic equipment)	S
Department of Statistics University of Legon/Ghana	- technical assistance, visiting professors provided by	S
	- twinning with a european university	S
	- 50 calculators	S
	- project of new buildings	M
Department of Statistics University of Ibadan/Nigeria	- supply of micro-computers	S
	- support in establishing a library	S
Department of Statistics National University of Lesotho	- 15 programmable calculators	S
	- technical assistance for the reorganisation of the programmes	S
EASTC Dar-Es-Salaam/Tanzania	- technical assistance for the organisation of level III courses (Institute of Statisticians)	S
	- new buildings	M
	- micro-computers	S
ISAE Makerere University/Uganda	- training of trainers and visiting professors through	S
	- twinning with a european university	S
	- support to regular activity	S
	- 50 calculators	S
	- office equipment	S
	- micro-computers	M
	- new buildings	M
IGFEA Yaoundé/Cameroon	- support in the establishment of an ISE training facility	M
	- supply of micro-computers	S
	- support for organising refresher courses locally	S
IAMSEA Kigali/Rwanda	- supply of micro-computers	S
	- local training of trainers	S
	- new buildings and equipment	M
	- support in the organisation of seminars	S

(*) All these actions have a regional aspect

ENSEA Abidjan/Ivory Coast	- supporting the establishment of ISE training facilities	M
	- supply of micro-computers	S
	- organisation of seminars and refresher courses	S
	- new buildings	M
CESD Paris	- supply of micro-computers	S
	- financial support to prepare booklets with past exam papers to be distributed to candidates and to be used in the preliminary courses for examinations	S
	- organisation of seminars and refresher courses	S
	- preparation of the transfer of the ISE training facilities to Africa	M
	- development of coordinating activities of the French-speaking training centres	S/M
ENEA Dakar/Senegal	- further to a recommendation of the Third Meeting of Directors of STPA centres, the needs of this centre will be indentified from the elements mentioned in the report on Senegal.	

CENTRES PARTICIPANTS AU PPCA
CENTRES PARTICIPATING TO STPA

Centres anglophones/English speaking centres

Department of Statistics - University of Botswana

Department of Statistics - University of Ibadan

Department of Statistics - National University of Lesotho

East African Statistical Training Centre, Dar-Es-Salaam, Tanzania

Institute of Statistics and Applied Economics, Makerere University, Uganda

Regional Institute for Population Studies, Ghana

Centres francophones/French speaking centres

Centre Européen de Formation des Statisticiens Economistes des Pays en Voie de Développement - Paris, France

Ecole Nationale d'Economie Appliquée - Collège Statistique, Dakar, Sénégal

Institut Africain et Mauricien de Statistique et d'Economie Appliquée
Kigali, Rwanda

Institut de Formation et de Recherches Démographiques - Yaoundé, Cameroun

Ecole Nationale Supérieure de Statistique et d'Economie Appliquée
Abidjan, Côte d'Ivoire

Institut des Techniques de Planification et d'Economie Appliquée
Alger, Algérie

Institut National de Statistique et d'Economie Appliquée - Rabat, Maroc

Institut de Statistique, de Planification et d'Economie Appliquée
Yaoundé, Cameroun

Centres associés européens/European associated centres

Centre de recyclage de Munich pour statisticiens économistes des pays en voie de développement, Carl Duisberg Gesellschaft - Munich, R.F.A. (Munich Centre for Advanced Training in applied statistics for developing countries)

Institute for Development Studies - Brighton, United Kingdom

Department of Applied Statistics - University of Reading, U.K.

Applied Statistics Research Unit - University of Kent, U.K.

Institute for Social Studies - The Hague, Netherlands

GLOSSARY

ACP	African, Carribean and Pacific States
BEPC	French-equivalent to O level
CESD	European Training Centre for Economist Statisticians from Developing countries Paris, France
EASTC	East African Statistical Training Centre Dar-Es-Salaam, Tanzania
ECA	United Nations Economic Commission for Africa
ENEA	National Training Centre for Applied Economics Dakar, Senegal
ENSEA	National Superior Training Centre for Statistics and Applied Economics Abidjan, Ivory Coast
IDS	Institute for Development Studies Brighton, United Kingdom
IFORD	Training and Research Institute in Demography Yaoundé, Cameroon
IAMSEA	African and Mauritian Institute for Statistics and Applied Economics Kigali, Rwanda
INE	National Institute for Economics Cotonou, Benin
ISAE	Institute of Statistics and Applied Economics Makerere, Uganda
ISE	French speaking country equivalent for postgraduate diploma in applied statistics and economics
ISPEA	Institute of Statistics, Planning and Applied Economics Yaoundé, Cameroon
ITS	French speaking country equivalent for first degree diploma in applied statistics
NHSCP	United Nations National Household Survey Capability Programme
RIPS	Regional Institute for Population Studies Ghana
STPA	Statistical Training Programme for Africa

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Third session of the Joint Conference
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and Demographers

Addis Ababa, 5-14 March 1984

REPORT ON JOINT EEC/ACP/ECA STUDY ON THE NEEDS FOR STATISTICAL TRAINING IN AFRICA

ADDENDUM TO THE GENERAL REPORT

STATISTICAL PROFESSIONALS IN SERVICE IN 1982

	National statistical service	Other ministerial statistical units	Employment outside government	Total
BOTSWANA	13	-	6	19
ETHIOPIA	50	37	62	149
THE GAMBIA	9	4	3	16
GHANA	34	5	36	75
KENYA	60	15	37	112
LESOTHO	15	10	7	32
LIBERIA	23	14	10	47
MALAWI	11	7	-	18
MAURITIUS	16	7	10	33
NIGERIA	165	155	48	368
SEYCHELLES	1	-	-	1
SIERRA LEONE	12	6	17	35
SOMALIA	17	18	14	49
SUDAN	79	15	48	142
SWAZILAND	10	2	10	22
TANZANIA	29	7	35	71
UGANDA	11	32	40	83
ZAMBIA	17	4	8	29
ZIMBABWE	28	12	20	60
TOTAL	600	350	411	1361

Staff in State Statistics Divisions

MIDDLE-LEVEL STATISTICIANS IN SERVICE IN 1982

	National statistical service	Other ministerial statistical units	Employment outside gouvernment	Total
BOTSWANA	6	3	-	9
ETHIOPIA	140	46	16	202
THE GAMBIA	5	2	1	8
GHANA	49	54	50	153
KENYA	167	45	58	270
LESOTHO	25	12	1	38
LIBERIA	81	30	40	151
MALAWI	17	12	29	58
MAURITIUS	60	15	20	95
NIGERIA	309	218	8	535
SEYCHELLES	4	-	-	4
SIERRA LEONE	13	12	11	36
SOMALIA	50	27	23	100
SUDAN	310	60	40	410
SWAZILAND	15	2	7	24
TANZANIA	28	40	23	91
UGANDA	26	45	30	101
ZAMBIA	98	34	38	170
ZIMBABWE	35	29	5	69
TOTAL	1438	686	400	2524

TRAINING REQUIREMENTS: POSTGRADUATE DIPLOMA/DEGREE

	1983	1984	1985	1986	1987	1988-92 average	TOTAL
BOTSWANA	4	2	1	1	1	1	14
ETHIOPIA	13	13	13	13	15	15	142
THE GAMBIA	1	1	1	1	1	1	10
GHANA	7	7	10	11	13	15	123
KENYA	5	5	5	5	5	5	50
LESOTHO	1	2	3	3	3	2	22
LIBERIA	4	4	4	4	4	4	40
MALAWI	2	1	2	3	4	4	32
MAURITIUS	-	1	1	1	1	1	9
NIGERIA	15	15	15	15	15	20	175
SEYCHELLES	1	-	-	1	-	1	7
SIERRA LEONE	1	1	2	3	3	2	20
SOMALIA	2	3	2	3	2	2	22
SUDAN	15	15	13	18	18	20	179
SWAZILAND	3	2	1	2	1	1	14
TANZANIA	5	5	5	8	8	7	66
UGANDA	5	5	8	10	13	8	81
ZAMBIA	2	4	4	4	4	4	38
ZIMBABWE	1	2	2	2	2	4	29
TOTAL	87	88	92	100	113	119	1073

TRAINING REQUIREMENTS: FIRST DEGREE

	1983	1984	1985	1986	1987	1988-92 average	TOTAL
BOTSWANA	2	3	2	3	2	3	27
ETHIOPIA	45	45	45	45	45	50	475
THE GAMBIA	-	-	1	-	1	1	7
GHANA	30	35	35	35	40	40	375
KENYA	24	24	24	24	24	24	240
LESOTHO	3	3	5	5	5	5	46
LIBERIA	2	17	22	27	25	20	193
MALAWI	-	-	-	-	-	-	-
MAURITIUS	-	-	-	-	-	-	-
NIGERIA							
SEYCHELLES	-	1	-	-	1	-	2
SIERRA LEONE	-	1	-	-	1	1	7
SOMALIA	3	3	3	3	3	3	30
SUDAN	30	35	40	50	50	50	455
SWAZILAND	4	5	4	4	5	4	42
TANZANIA	20	20	20	25	25	25	235
UGANDA	40	40	40	40	40	40	400
ZAMBIA	10	5	2	3	3	20	123
ZIMBABWE	-	25	30	30	35	40	320
TOTAL	213	262	273	294	305	326	2977

No projections made since all requirements will be met from own resources (see Report)

TRAINING REQUIREMENTS: MIDDLE-LEVEL

	1983	1984	1985	1986	1987	1988-92 average	TOTAL
BOTSWANA	11	11	11	11	11	12	115
ETHIOPIA	35	35	45	45	50	50	460
THE GAMBIA	2	2	2	2	2	3	25
GHANA	50	50	50	50	50	50	500
KENYA	30	30	30	30	30	30	300
LESOTHO	8	8	8	10	10	10	94
LIBERIA	50	40	30	30	30	30	330
MALAWI	8	7	7	7	7	7	71
MAURITIUS	-	-	-	-	-	-	-
NIGERIA							
SEYCHELLES	1	2	2	2	2	2	19
SIERRA LEONE	-	15	15	15	15	20	160
SOMALIA	30	30	30	30	30	30	300
SUDAN	5	25	22	22	27	30	251
SWAZILAND	15	18	15	18	15	15	156
TANZANIA	34	34	46	46	55	55	490
UGANDA	16	16	30	30	30	30	272
ZAMBIA	10	55	27	58	33	40	383
ZIMBABWE	35	40	40	40	40	40	395
TOTAL	340	410	410	446	437	456	4321

No projections made since all requirements will be met from own resources (see Report)

STATISTICAL PROFESSIONALS IN SERVICE IN 1982

	National Statistical Services	Other Governmental Statistical Services	Other Sectors	Total
BENIN	48	10	:	58
BURUNDI	21[1/]	5	2	28
CAMEROON	100	40	60	200
CENTRAL AFRICAN REPUBLIC	2	-	2	4
CONGO	26	7	1	34
GABON	12[2/]	1	-	13
GUINEA	124[3/]	-	-	124
IVORY COAST	16	10	54	80
MADAGASCAR	21	20	3	44
MALI	34	22	12	68
MAURITANIA	3	2	2	7
NIGER	5	10	-	15
RWANDA	4	14	5	23
SENEGAL	57	20	10	87
TCHAD	:	:	:	:
TOGO	25	15	5	45
UPPER VOLTA	:	:	:	:
ZAIRE	53	63	19	135
TOTAL	551	239	175	965

1/ of which only 3 have a statistical training

2/ of which only 2 have a statistical training

3/ of which only 7 have a statistical training

: not available

STATISTICAL SUB-PROFESSIONALS IN SERVICE IN 1982

	National Statistical Services	Other Governmental Statistical Services	Other Sectors	Total
BENIN	13	5	-	18
BURUNDI	26	8	6	40
CAMEROON	109	40	34	183
CENTRAL AFRICAN REPUBLIC	6	3	1	10
CONGO	10	26	1	37
GABON	11	-	-	11
GUINEA	45	-	-	45
IVORY COAST	20	15	24	59
MADAGASCAR	27	15	2	44
MALI	27	5	9	41
MAURITANIA	4	12	3	19
NIGER	5	47	-	52
RWANDA	5	-	-	5
SENEGAL	59	20	5	84
TCHAD	:	:	:	:
TOGO	12	24	-	36
UPPER VOLTA	:	:	:	:
ZAIRE	185	101	42	328
TOTAL	564	321	127	1012

REQUIREMENTS IN ISE AND ITS

	ISE trained during the 5 previous years	Forecasts 1983-1987	Forecasts 1988-1992	ITS trained during the 5 previous years	Forecasts 1983-1987	Forecasts 1988-1992
BENIN	10	10	10	25	25	30
BURUNDI	0	3	3	3	10	10
CAMEROON	14	15	16	74	75	75
CENTRAL AFRICAN REP.	1	3	5	3	10	10
COMOROS	0	1	2	0	2	3
CONGO	3	4	5	19	20	25
DJIBOUTI	0	0	1	0(1 in training)	5	5
GABON	1	5	5	2	25	25
GUINEA	0	0	1	0	5	5
IVORY COAST	10	15	15	35	50	50
MADAGASCAR	4	5	5	1	10	15
MALI	8	10	10	22	30	30
MAURITANIA	1	3	5	0(2 in training)	10	10
MAURITIUS	0	0	1	5	5	5
NIGER	1	3	5	1	10	15
RWANDA	0(2 in training)	5	5	20	35	35
SENEGAL	14	15	15	5	25	25
TCHAD	0	2	3	5	10	10
TOGO	1	4	5	23	25	25
UPPER VOLTA	2	3	5	11	11	15
ZAIRE	0	5	5	1	20	20
extra ACP	14	20	20	-	-	-
TOTAL	84	131	137	255	418	443
of which ACP	70	111	117			

REQUIREMENTS IN ADJOINTS TECHNIQUES AND AGENTS TECHNIQUES

	Adjoints techniques trained during the 5 previous years	Forecasts 1983-1987	Forecasts 1988-1992	Agents techniques trained during the 5 previous years	Forecasts 1983-1987	Forecasts 1988-1992
BENIN	8	30	40	5	70	100
BURUNDI	2	20	20	12	20	30
CAMEROON	52	80	80	62	100	100
CENTRAL AFRICAN REP.	4	40	30	22	50	50
COMOROS	-	5	5	-	-	-
CONGO	18	50	50	35	70	70
DJIBOUTI	2	10	10	-	20	20
GABON	-	10	30	7	20	20
GUINEA	3	10	10	4	4	4
IVORY COAST	28	60	60	39	70	70
MADAGASCAR	-	40	50	-	50	50
MALI	12	40	50	6	50	50
MAURITANIA	-	15	25	-	15	30
MAURITIUS	-	-	-	-	-	-
NIGER	-	20	30	7	30	50
RWANDA	4	50	50	3	70	70
SENEGAL	-(1)	-	-	1	50	50
TCHAD	-	15	15	10	20	30
TOGO	15	30	30	10	20	30
UPPER VOLTA	11	30	30	18	40	40
ZAIRE	1	30	50	1	40	€
TOTAL	160	585	665	242	809	924

The ENSEA

The ENSEA now has plenty of experience. After more than 20 years, it is paradoxical that the majority of the teaching staff are expatriates. The Ivory Coast has a sufficient number of trained staff to take on such responsibilities. As in the case of the Ivory Coast administration and that of the statistical services in particular, the solutions are in the hands of the national authorities. A statute for teachers at the 'Grandes Ecoles', which has already been discussed, is the remedy not only for the ENSEA but also for the 'Grandes Ecoles' in the Ivory Coast.

Abidjan is an active university city constituting a favourable location for the introduction of an ISE course. This project, which has been made possible by the new Statutes of the School, must therefore be supported and carried out with the necessary care to ensure its success. The introduction of a joint competition and concentration of the schools which will provide this training will constitute a guarantee of high standards, as in the case of ITS training.

When it is housed in its new premises, the ENSEA will be able to take more students and could then consolidate its regional nature for ITS and ISE training.

The AD and AT types of training should become less and less regional with the progressive development of national schemes in the various countries sending candidates to the ENSEA, contrary to what should happen in the case of the ITS and, subsequently, the ISE.

ITS training at the ENSEA would benefit by placing more emphasis on sectoral statistical methods, which are of most relevance for the countries served by the ENSEA (agricultre, food supply, etc.). As regards training in the preparation and processing of data, the ENSEA has developed this activity and its only need now is for more equipment.

In order to gain a better idea of the jobs taken by ENSEA graduates, something along the lines of an association of former students would be very useful. It could also act as a forum for follow-up meetings and exchanges of experience.

The ENSEA has an urgent need for new premises which should be able to meet the requirements of the next ten years.

The ISPEA

The ISPEA is to some extent proof that it is possible to africanize a higher level school provided the political will exists. Most of the teaching staff are from Cameroon and its courses are held in high esteem beyond the country's borders.

Yaoundé is an active university city. Cameroon has numerous ISE and the ISPEA is on the way to becoming a regional school under UDEAC patronage - three reasons why, in addition to the way it is run, this institute is a suitable location for ISE training. The construction projects prepared by the present Director of the school have also taken this prospect into account.

To implement these plans the ISPEA will need foreign teachers, at least in the initial period (three to five years). These should be replaced by African teachers without too much delay even if this means that the ISPEA will require the financial support of foreign bilateral or multilateral funds.

As in the case of the ITS, the organization of a joint competition for the centres to which ISE training is to be transferred and coordination of the programmes should guarantee smooth running and an equivalent level in the different centres.

The new statutes of the ISPEA will give a very regional note to its ITS training and to its future ISE training.

The courses for Statistical Assistants and Statistical Technicians need not be integrated in the regional structure. The development of national training schemes at these levels will reduce the number of candidates from other countries.

ITS training would benefit by placing greater emphasis on sectoral statistics (agriculture, food structures) and data preparation (processing, presentation, analysis). To this end informatics facilities would have to be expanded.

In order to gain a better idea of the kind of jobs done by ISPEA graduates, it would be very advisable to set up an association of former students. Such an association could also be a useful forum for follow-up meetings and the exchange of views.

The existing plan for new premises will provide good working conditions for a greater number of ITS and ISE students. Construction of these premises is fully justified in this light.

The IAMSEA

The IAMSEA is the most recent of the three schools taking part in the joint competition. The Institute was set up in 1975 to transfer the training of ITS statisticians under the CESD to a regional centre and has a very good reputation among the statistical services employing the statisticians it trains.

The problesm of this school are financial. The States which set it up have to contribute to the IAMSEA budget. While this procedure is improving and becoming more reliable, the situation is still delicate.

Because of this and because of the cumbersome nature of the administrative machinery, the IAMSEA is not africanizing the teaching staff very quickly. Progress has certainly been made: there is already one permanent African teacher and the aim is a rate of 1-2 new African teachers per year. Progress could be jeopardized by premature withdrawal of the support represented by the remuneration of expatriate teachers. A way of reducing this cost would be through subsidies to pay the African teachers; this would accelerate africanization in the school and ensure that the school's own budget was able to take over the financing of these teachers at a rate it could manage.

The training provided by the IAMSEA should include more of the sectorial statistics of most relevance to the countries in question (agriculture, food supply). The essential development of computer techniques depends on an increase in the equipment available.

A former students' association would be useful to provide information on the jobs taken by people with IAMSEA diplomas. It would also facilitate the organization of meetings to exchange information or discuss refresher courses.

When the new buildings are ready, the IAMSEA will be able to take more students to meet the needs of the user countries over the next 10 years.

The CESD

The CESD is something of a special case among the schools participating in the STPA in that

- it is located in Europe but is regarded as a participant in the programme;

- it has established links with the ENSAE which are of a new and at the same time exemplary character;

- it provides a means of coordinating the activities (ranging from entrance procedures to curricula of three African schools - those of Kigali, Yaoundé and Abidjan; this is an unusual feature, which ensures that the teaching scheme employed in these three schools enjoys a quite exceptional reputation throughout the region.

In the future, the CESD will have to make an active contribution to transferring ISE training activities to the Abidjan and Yaoundé schools. To this end, and also in order to safeguard what has already been achieved, the CESD will have a continuing role after the transfer of the ISE division, consisting in

- the organization of ITS and ISE common entrance examinations;

- supply of teaching material to the schools;

- coordination of the activities of the African schools.

As certain countries are under-represented in terms of both ISE and ITS students, the CESD requires financial resources to enable it to provide the countries which account for an unduly small proportion of successful candidates with the educational means to organize courses preparing students for the competitive examination.

Closer links between the African schools and the CESD could also be established after the transfer either by creating an association of African schools or by ensuring that they are more closely involved in the CESD association.

The IFORD

The IFORD, in its new premises, is a school which is in good shape. It has a good reputaiton and attracts a large number of applicants (50 for the examination in 1974 and 238 in 1982). It is interesting to note the trends in the categories of the applicants. Whereas when the school opened most applicants took the A option, this ratio has been reversed and for the past two years some 60% of the applicants take the B option. This trend is due to the fact that the population studies diploma is recognised as being equivalent to that of an ISE (Economic Statistician).

The two examinations are on very different levels, the ISE examination being much more difficult as regards the programmes and examinations. In all fairness the level of the entrance examination for the IFORD ought to be raised considerably, otherwise the administrative category of equivalent to ISE would be an incentive to train demographers. While this is a speciality which is necessary for statistics, it is not the only one required in the statistical directorates. Apart from considerations of fairness there is thus also a requirement regarding the needs of the countries.

The way in which the grants are administered by the Institute independently of the countries has led to a marked imbalance. The countries which have most professional people and most demographers continue to train the highest numbers. While this method of administration makes life easier for the School, it creates imbalance. The individual country reports show that demographic studies is not a specialization which is felt to be in short supply in the countries at present. The average number of graduates which the IFORD can produce at present (20-25 per annum) is therefore adequate. This is because the training given for both ITSs and ISEs includes demographic studies along with other areas of statistics, and also because the lack of statisticians is felt less keenly in the area of demographic studies than in other economic and social sectors.

To sum up, demographic studies is a sector of African statistics which has made progress and at present other fields call for a major effort.

REGIONAL INSTITUTE FOR POPULATION STUDIES

The Regional Institute for Population Studies (RIPS) was set up by the United Nations in agreement with the Government of Ghana. It is situated on the campus of the University of Ghana at Legon and the degrees and diplomas it awards are those of the University, so it has to follow the rules of the University in academic matters. However, legally it is a fully regionalised institution. RIPS receives substantial support both from the UN and the Government of Ghana.

RIPS offers the following courses in demography:

i. Graduate Diploma (twelve months)
ii. M.A. Degree (at least twelve months, by classwork and dissertation)
iii. Ph. D. Degree (individually designed research).

The Diploma is designed for graduates from virtually any discipline and so concentrates on the application of demographic techniques rather than the theory behind them. Students who gain a good pass at the Diploma are admitted to the M.A. course. Those with an acceptable equivalent qualification are accepted directly to the M.A. but this seems to happen very rarely. Enrolment on the Diploma course has been growing in recent years to reach 37 in 1981, and pass-rates are generally between 60 and 90 per cent. Between 5 and 10 students are admitted to the M.A. course annually, and Ph.D. students are admitted very occasionally. RIPS also provides a range of research, advisory and documentation services in African demography.

Virtually every English-speaking African country has sent students to RIPS in the last six years, though 30 per cent have been Ghanaians. The Institute tries to ensure a good geographic distribution of students but are of course constrained by the applications received. Discussions with user countries indicated two main constraints which may limit their use of RIPS in the future. The first is the difficulty experienced by students in recent years with living conditions in Ghana. The second is the length of the training programme: more than two years is taken to complete an M.A. and countries compare this unfavourably with the eighteen months taken at universities outside Africa. The UN provide some 50 new fellowships each year for study at the Institute. The impression gained in many countries was that the readiness with which a fellowship can be secured has produced some in-balance in the specilisation of the statisticians in post, and that postgraduate courses now need to be developed in other areas of applied statistics to redress the balance.

The staff of RIPS are supplied by the UN and the Government of Ghana: at present the Director and four experts are provided by the UN and the other eight staff members are seconded by the University of Ghana (of which three are research assistants). There are four vacant posts, two at the research assistant level. Part time lectures from elsewhere in Ghana and abroad are also employed.

RIPS is accommodated in a complex of buildings constructed by the Government of Ghana to house the Institute of Statistical, Social and Economic Research of the University, with whom it shares a library. Students are accommodated in the University halls of residence. These facilities are generally adequate for the

current needs of the Institute. Computing facilities will be improved by the acquisition of a mini-computer which UNFPA are to provide to analyse the Ghana Population Census: this mini-computer will be housed at RIPS. All students are given an allowance to buy their own calculator.

In conclusion, it appears that RIPS has adequate support to fulfil its functions and no particular areas of need were identified. A more urgent need is to develop programmes similar to that of RIPS in other fields of applied statistics, and in doing so many features of RIPS could usefully be taken as a model, particularly its relationship with the University and the organisation of its teaching programme.

DEPARTMENT OF STATISTICS, UNIVERSITY OF BOTSWANA

The Department of Statistics is located in the Faculty of Social Science and offers three courses:

i. Certificate in Statistics (middle-level, one academic year)
ii. Diploma in Statistics (sequel to Certificate, two academic years)
iii. B.A. degree with statistics as a single subject or as part of a joint degree (four academic years).

Diploma-holders who wish to continue their studies to read for a degree have to join the third year of the degree programme, even though in doing so they will spend a year repeating material already covered in the Diploma. In 1982 the output of the Department was 6 Certificate-holders, 6 Diploma-holders and 4 graduates (a drop from 11 in 1981).

When the STPA was set up the Department belonged to the University of Botswana and Swaziland, which divided into two national universities in 1982. The University of Swaziland offers a statistics degree course so there are now no Swazi students in the Department. Malawi has sent students for the Certificate and Diploma courses regularly over the last few years, and intends to continue to do so in the future. However, Botswana itself is the major user of the courses and is likely to remain so. The programme of the Department does not fit in very well with the trainnng plans of other countries in the region and no other potential user countries were identified.

The Department has a complement of six lecturing staff, of which two posts are vacant: they hope to recruit replacements through the Inter-University Council (UK) during 1983. Only one lecturer is a Botswana citizen, although all expatriates are on local terms. Two staff development fellows are abroad on training, and so when they return the Department will be 50 per cent localised. This is a more favourable position than in many parts of the University, and further progress will be made as quickly as possible, though the process is likely to take up to ten years to complete.

The Department shares the building of the Faculty of Social Sciences, the Faculty administrative facilities and the University library. Students reside in University halls of residence. The Department would benefit from having its own reproduction facilities for lecture notes and other documents, and is in urgent need of computing equipment to teach statistical computing. There are no computing facilities either in the Department or for the University as a whole. I recommend that such equipment should be provided.

The other major ways in which the Department of Statistics could meet more closely the needs of their users are in the restructuring of its programme and the introduction of more topics in applied statistics. It seems that minimal re-structuring would be necessary for Diploma-holders to proceed to the fourth year of the single subject degree course. The Department and the University authorities also expressed interest in forging formal links with the Institute

of Statisticians (UK) so that the Department's courses might be given their recognition. I suggest that the dual aims of restructuring the programme and gaining formal recognition from the Institute might be combined, and I recommend that a visit to the University of Botswana by a representative of the Institute should be financed in order to examine these questions.

Although the Certificate and Diploma courses contain topics in official statistics and some practical project work, graduates - particularly those who have taken statistics as part of a joint major degree - have had little exposure to practical statistical problems and may have had no training field survey techniques. Much more could be done if liaison with the CSO, Botswana, was closer, and I suggest that efforts should be made from both sides to exchange ideas and experience, and to become more involved in each other's programme. I also suggest that a field project should be made compulsory for the single major degree and that the topics should be chosen in collaboration with the CSO, linked perhaps to their household survey programme.

DEPARTMENT OF STATISTICS; UNIVERSITY OF GHANA, LEGON

The Department of Statistics is located in the Faculty of Science and offers the following courses:

i. Certificate in Statistics (middle-level, one academic year)
ii. Diploma in Statistics (sequel to the Certificate, one academic year)
iii. B.Sc. with statistics as a single subject or as part of a joint degree (three academic year)
iv. M.Sc. in statistics (preparation for academic work, two academic years)
v. Postgraduate diploma in statistics (for those whose first degree was not in statistics, one academic year).

The Certificate and Diploma courses have been taught by the Institute for Statistical, Social and Economic Research in the past but assurances were given that they would be transferred to the Department in October 1983. At the same time the Department hope to begin a second type of postgraduate diploma orientated towards applications of statistics. In recent years students have been encouraged to take statistics as part of a joint degree rather than as a single subject and between 20 and 30 graduates qualify annually. About 20 Certificates and 20 Diplomas are awarded each year. M.Sc. students are received only very occasionally and there are less than 5 students on the postgraduate diploma course each year. The Department has close links with the Ghana Central Bureau of Statistics and is keen to orientate its programme towards practical statistics and to provide more in-service training for statisticians.

The Department receives applications from foreign students only very occasionally. This is likely to continue, mainly due to resistance by students in potential user countries to study in Ghana because of their perception of the difficulty of living conditions there. The Department and the University authorities accept that in the medium term they will not be able to act as a regional centre, both for this reason and because the Department's facilities, particularly at the undergraduate level, are virtually at full capacity training Ghanaians. However, in the long-term the proposed postgraduate diploma could meet the demand expressed by many countries in the region for this type of training.

The Department has an approved establishment of 12 teaching posts, of which only 6 are filled at present, all by Ghanaians. In addition there are three teaching assistants, for one of whom the Department are trying to find sponsorship to study abroad so that they may join the Department as a lecturer. Assistance in the area of manpower is probably the Department's most urgent need, both support for a staff training programme and assistance from visiting lecturing staff, particularly in order to expand postgraduate teaching in the ways envisaged. Both types of assistance could best be provided by a link with a Department of Statistics in a European university, preferably one with a bias towards applied statistics and in particular sampling theory and practice. I recommend that a suitable "twin" Department should be sought and that such a link be financed.

The Department shares the building of the Department of Mathematics. Work has started on a new building to house the Department of Statistics alone, but has been suspended due to lack of finance and building materials, and will not now be completed for at least two years, and may take considerably longer than this. A mini-computer is being provided by UNFPA as part of their support to the Ghana population census, and the Department will have access to this equipment, though it will not be housed there. There is an urgent need for 50 desk calculators to equip a statistical laboratory for practical work, and I recommend that these should be provided. Other equipment requirements identified are mainly connected with the new building and their provision should be reviewed at a later stage.

DEPARTMENT OF STATISTICS, UNIVERSITY OF IBADAN, NIGERIA

The Department of Statistics is located in the Faculty of Science and offers the following courses:

i. Professional Diploma in Statistics (middle/intermediate level, two years)
ii. B.Sc. in Statistics (three years)
iii. Postgraduate Diploma (one academic year)
iv. M.Sc. (by examination, one year)
v. M. Phil. (by independent research)
vi. Ph.D. (by independent research).

An average of about 20 professional diplomas are awarded each year, and about 15 students graduate in statistics, although the number fluctuates considerably. Between 5 and 10 postgraduate diplomas are generally awarded and about the same number of M.Sc. degrees. There are 6 students currently registered for M. Phil. or Ph.D. degrees.

The Department receives applications from foreign students only very occasionally. Although they are keen to encourage registration of foreign students and the University have agreed to reserve a number of places on each of the statistics courses for them, very few potential user countries were identified in the course of this study. In fact Nigeria's own demand for statisticians is great and so the primary aim should be to help meet this. However, the high academic standard of the courses is such that they might be suitable for training trainers for other African universities who at present use institutions outside Africa to give their potential academic staff post-graduate training. The Department would be well-placed to take or this role since it already has extensive contacts with universities in the region, providing visiting lecturers and external examiners.

There are eight teaching staff, one graduate assistant and one research officer, all Nigerians funded by the University. The Department would like to increase its staff to 22 by 1984/85, though this will depend on the agreement of the University to create the additional posts and the ability to recruit suitable staff to fill them. They envisage that all will need postgraduate training abroad, despite the fact that facilities are already available in the Department, and that counterpart staff will be needed whilst they are away.

The Department shares the same building as the Department of Mathematics. Work has begun on building a teaching block for Statistics alone, financed by the University, but no progress has been possible for sometime due to lack of finance. The Department has access to the University computer and students are taught computer science by the Department of Computer Science. Laboratory equipped with micro-computers, both for teaching and research purposes. I recommend that they should be provided with suitable equipment to allow simultaneous access by up to eight users. They are also hampered by the lack of a properly stocked library, and I recommend that assistance should be given to help build up a stock of modern reference books.

One of the general conclusions from this study is the need to run more seminars and workshops in Africa for working statisticians. Ibadan would be well placed to provide a venue for such activities, and independently have expressed interest in taking on such a role. I suggest this should be borne in mind when a programme of activities of this sort is developed.

DEPARTMENT OF STATISTICS, NATIONAL UNIVERSITY OF LESOTHO

The Department of Statistics is located in the Faculty of Social Sciences and offers two courses:

i. Certificate in Statistics (middle-level, two academic years, maximum of about 12 places)
ii. B.A. double major degree in Statistics and one other subjects, e.g. Economics, Mathematics (four academic years)

A one-year Diploma used to be offered as a sequel to the Certificate but this has been suspended because it is now felt to be redundant: Diploma-holders invariably went on to the degree course. Certificate-holders may transfer to the third year of the degree programme after the completion of one year's work experience. The Department aim to up-grade the present degree course to an honours double major.

Lesotho is the only user country, apart from occasional refugees from countries such as South Africa, and is likely to remain so. The programme of the Department does not fit in very well with the training plans of other countries in the region, and no other potential user countries were identified. Intake to the Certificate programme has been growing in recent years and reached 9 in 1982. Between 5 and 10 graduates are produced each year, though student numbers on the first and second year courses are very much higher because these are compulsory for a wide range of degree programmes.

There are five teaching posts in the Department, all of which are filled by expatriates on local terms, although in the recent past CIDA provided two externally funded lecturers. CIDA is supporting a project to strengthen various parts of the University, in which the Department is singled out. At present they are sponsoring three teaching assistants on postgraduate studies abroad, who, with a fourth being sponsored by UNDP/STrA, will ensure virtual localisation of the Department by about 1987, although a more experienced head of Department will be needed for some time. CIDA would also be prepared to provide an extra lecturer but the University will not agree to create an extra post to make this possible. This is unfortunate since the teaching load of existing staff is very heavy: the Department has the largest student enrolment in the University, about 40 per cent of all undergraduates have to take basic statistics courses.

The Department shares the building and administrative facilities of the Faculty of Social Sciences and the University Library. Students reside in University halls of residence. A mainframe computer is being installed, on which the Department hope to mount a range of statistical software. Their main need is for about 15 programmable calculators to use for practicals for second, third and fourth year courses. I recommend that these should be provided.

The Department has close links with the Lesotho Bureau of Statistics who are the main employers of students. The Bureau are fairly happy with the content of the courses, which include topics in applied statistics and project work. However, both the Bureau and the Department would be very interested to forge formal links with the Institute of Statisticians (UK) so that the Certificate course might be given their recognition. I recommend that a visit to the University by a representative of the Institute should be financed in order to examine this. (This could be combined with a similar visit recommended for the University of Botswana).

EASTERN AFRICA STATISTICAL TRAINING CENTRE (EASTC) TANZANIA

The EASTC was set up originally as an institution of the East African Community and the Government of Tanzania took over responsibility for it in a caretaker capacity on the break-up of the Community. However new legal statutes have been drawn up so that the centre should become a fully autonomous regional institution. These have been sent to potential user countries for ratification, and it is hoped that they will be enacted sometime in 1983.

The EASTC offers two courses:

i. Certificate in Statistics (middle-level, ten months, capacity of 70 students);
ii. Diploma in Statistics (intermediate level, ten months, capacity of 30 students).

A short course (6-8 weeks) for statistical clerks is also offered occasionally.

Total enrolment at the Centre doubled in 1979 to a level of about 90 students, which level has been maintained. In 1982 89 students were admitted on the Certificate course and 29 on the Diploma course. Pass rates for the Diploma are generally about 90% (including re-takes) but those for the Certificate have been much lower since the increase in class size.

There are at present six teaching staff, all Tanzanians, of which two are at present abroad on study leave. CFTC are trying to recruit an expatriate to cover for the absent staff. Only one staff member is neither studying or has obtained a postgraduate qualification. The Centre would like to attract teaching staff from other countries in the region once it achieves regional status.

The teaching accommodation of the Centre is most unsatisfactory: it has only two classrooms and four offices, all in different parts of the campus of the University of Dar-es-Salaam. Students are accommodated in the University's hostels, but it is not clear how long this will be possible once the Centre becomes an autonomous regional institution. The Centre has to share the University's library and has no access to computer facilities. One of the main complaints by user countries concerns the difficulty of living conditions at the Centre: although these result in part from general difficulties in Dar-es-Salaam (for example, shortages of essential commodities), these most unsatisfactory facilities are also contributory factors.

The Institute of Statisticians (UK) assisted in the construction of the Certificate and Diploma syllabuses and these qualifications carry exemption up to Stage I and Stage II of the Institute's own examinations respectively. Stage III of the Institute's examinations qualifies the holder for Membership of the Institute, generally considered the equivalent of an honours degree in statistics, and difficulty has been caused in many African countries by the fact that there is now no institution offering a full-time Stage III course. I suggest that EASTC might consider developing a one-year course which would qualify successful students for Membership of the Institute. This would fill an important gap, and I recommend

that if they decide to pursue the idea, technical co-operation inputs should be provided if requested.

The EASTC has requested funds from the EDF to cover the costs of a new building to comprise a teaching block, student hostel and staff accommodation. This, together with the projected growth of staff numbers to ten, is based on student numbers forecast to reach 150 by 1984. This study has shown that this number will not be achieved, mainly because of the growth in similar local training facilities in the potential user ccutries in the region. Indications are that numbers will not rise above 100, that demand for the Certificate course will decrease slightly to between 50 and 60 places per year (by 1987 almost exclusively from Kenya and Tanzania), but that demand for the Diploma will increase to about 40 places per year (from a wider range of countries). If a course leading to Membership of the Institute of Statisticians is added, this might have an intake of about 20 students per year.

I recommend that favourable consideration should be given to the building request, but that it should be revised to cater for 100 or 120 students (depending on whether the centre decide to offer a third course), and 8 members of staff. Computing equipment is also an urgent need, and I recommend that a micro-computer suitable for teaching statistical computing should be provided, though this may have to wait until the completion of the new building, since at present the Centre has nowhere to house it.

INSTITUTE OF STATISTICS AND APPLIED ECONOMICS, MAKERERE UNIVERSITY, UGANDA.

The Institute of Statistics and Applied Economics (ISAE) is an autonomous Institute within the legal framework of the University. This rather ambiguous relationship has caused some conflict between University entrance regulations and those which the ISAE wish to implement, particularly in giving exemptions for other types of training received and in the recognition of examinations other than A-Levels as entrance qualifications. It is important that priority should be given to clarifying these matters, and to making the Institute self-accounting.

The ISAE offer a three year B.Stat. degree course which is designed specifically to train professional statisticians and has a high practical content. In October 1983 they hope to be able to offer a postgraduate professional diploma in statistics (Dip. Stat.) which will focus on economic statistics. Although these plans have existed for a long time (and the STPA Directory indicates that the course is already available), in fact they have never been implemented. This ISAE would like to add options in other areas of applied statistics in due course.

The intake of students to the B.Stat. course has averaged about thirty in recent years. Twenty places are reserved for Ugandan students although often considerably more than this are admitted. Over the last six years an average of seven foreign students each year have been admitted from eight countries in the region, most coming from Kenya. The Institute are keen to attract more foreign students, and the contents of the B.Stat. course is held in high regard by all countries in the region. The proposed Dip. Stat. would also go a long way to meeting the needs expressed by many countries for this type of training. However, the major limiting factor on the number of applications the ISAE are likely to receive, particularly for the B.Stat. course, is the perception in potential user countries of the difficulty of living conditions and general instability in Uganda. Nevertheless, most of the current user countries (e.g. Kenya, Zambia, Liberia) will continue to use the B.Stat., and a much wider range of countries would be interested in using the Dip. Stat.

Out of an establishment of 27 teaching posts, 19 are vacant. There are an additional 11 "graduate fellows", of whom 6 are on postgraduate courses abroad and 5 are waiting to go for training. Although the Commonwealth Fund for Technical Cooperation are currently recruiting two lecturers to support the area of manpower, both support for a staff training programme and assistance from visiting lecturing staff for short and long periods. Both types of assistance could best be provided by a link with a Department of Statistics in a European University, one which has a bias towards applied statistics. I recommend that a suitable "twin" Department should be sought and that such a link be financed. Consideration should also be given to supplementing the salaries of local members of staff so that they can concentrate on their teaching commitments instead of having to seek additional work, and to reduce staff turnover.

The ISAE is housed in buildings of the Faculty of Science and are very short of space, particularly staff offices. The University agreed to provide a new building but this has not proceeded further than excavation of the foundations because of lack of foreign exchange for imported inputs. Students are accommodated in University halls of residence but their capacity is limited and there are difficulties in reserving places for foreign students who often arrive late. The ISAE thus feel that they need a separate student hostel. They also identified a wide range of requirements for equipment, partly to equip their new teaching block and partly for rehabilitation purposes. Of the latter, the most urgent needs are for a photo-copier and a diplicator, for about 50 desk calculators, and for general office equipment such as typewriters and filing cabinets. I recommend that this basic equipment should be provided. Although ISAE places emphasis on the teaching of statistical computing, they do not have access to any computing facilities. Although proposals have been made for a fairly large mini-computer system to serve the needs of the Ugandian statistical service and the University, there will still be a need for micro-computing equipment specifically for teaching purposes at the ISAE. I recommend that such a machine should be provided.

Investment in an institution in Uganda at present involves something of an act of faith. However, the postgraduate programme the ISAE hope to develop fills the most significant gap identified in this study in training facilities in Africa, i.e. postgraduate courses in areas of applied statistics. Therefore I suggest that it should be supported in the first instance in terms of manpower and basic equipment, and that the position regarding buildings and other items of equipment should be reviewed in about three years' time.